



THE CULTIVATOR.

THIRD

To Improve the Soil and the Mind.

SERIES

VOL. VII.

ALBANY, JANUARY, 1859.

No. I.

PUBLISHED BY LUTHER TUCKER & SON,

EDITORS AND PROPRIETORS.

ASSOCIATE ED., J. J. THOMAS, UNION SPRINGS, N. Y.

PRICE FIFTY CENTS A YEAR.

THE CULTIVATOR has been published twenty-five years. A NEW SERIES was commenced in 1853, and the six volumes for 1853, 4, 5, 6, 7 and 8, can be furnished, bound and post-paid, at \$1.00 each.

The same publishers issue "THE COUNTRY GENTLEMAN," a weekly Agricultural Journal of 16 quarto pages, making two vols. yearly of 416 pages, at \$2.00 a year. They also publish

THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS —144 pp. 12 mo.—price 25 cents—\$2.00 per dozen. This work was commenced in 1855, and the nos. for 1855, '56 and '57, have been issued in a beautiful volume, under the title of "RURAL AFFAIRS,"—containing 449 engravings of Houses, Barns, Out-Houses, Animals, Implements, Fruits, &c.—price \$1.00—sent by mail post-paid.

The New Volume.

Although we have never been desirous of obtruding our business arrangements upon public notice, or of making a display of names, it still seems appropriate at the opening of a new year and volume, to assure readers that we are at least doing our best to advance their interests and deserve their patronage. We have never entered upon a year for which we have thought ourselves able to make higher promises, and keep them, than we now can for 1859—not only as regards the prospect for the continuance and extension of the voluntary correspondence with which we have been favored to an unparalleled degree for several years past, but also with respect to the direct engagements into which we have entered for editorial assistance.

Our associate JOHN J. THOMAS, will of course continue to afford us his invaluable aid. Readers may not all be aware how much, in other departments of this journal beside the Horticultural, they have always been indebted to his extensive practical acquirements, accurate judgment and sound reasoning.

Mr. J. H. BIXBY, now a farmer in Niagara county, but known for many years to the readers of agricultural journals as an editor or contributor, has during the past year written many of the plainest and most pointed articles we have published,—marked by clearness and force of reasoning, brevity, and practical knowledge, and thus best calculated to strike the eye and impress the mind and memory. It gives us pleasure to say that we shall receive during the coming year, largely increased assistance from this source.

Those who have been familiar with the contributions to our columns of Mr. LEVI BARTLETT of New Hamp-

shire, will not need to have their attention called to the sterling value with which they have been generally replete. Mr. BARTLETT's assistance will be continued as heretofore.

Our expectation is to supply upon all the wide variety of subjects which claim the attention of the practical farmer, the village cultivator, the gardener, the orchardist, or the extensive land owner, better chosen and more complete stores of seasonable information and suggestive hints, than has even been the case during 1857 and 1858. THE CULTIVATOR will share in these with the COUNTRY GENTLEMAN, to the extent of its capacity. The latter Journal includes a large number of separate Departments, in which something is every week presented, in order that no one may ever fail of finding more or less suited to his tastes and wants. In the CULTIVATOR, which appears at intervals four times greater, it is of course impracticable to attempt so much, and we can only compress a comparatively limited part into its smaller pages.

But we have this advantage from the fact that both the weekly and monthly journals are issued from one source, that the latter derives a great proportion of the benefit of those arrangements which the former compels; expenditures which no *Fifty Cent or Dollar* journal could for a moment think of sustaining, become easy by this connection with one of higher price, and the only difficulty we experience, when with each recurring month we are getting ready the next issue of the CULTIVATOR, is to get into its columns all that we wish to select for them from the wide field in which we have to choose.

Hence it is that we so earnestly solicit our friends to extend the circulation of THE CULTIVATOR. For the insignificant sum of a *Half Dollar* its readers receive so much, that it seems as if no man, after an explanation of the subject and a moment's thought, could hesitate to subscribe,—as if, in fact, it would be taken, as it should be, by hundreds of the farmers who surround every post-office, instead of by twos and threes, or tens and twenties. We offer to forward numbers of the paper for the examination which we invite, and we can but again express the hope that every one under whose eye this article may come, will feel inclined to respond with a little hearty effort to attract public attention to the subject.

It will not be forgotten that subscribers in clubs also receive for the *Fifty Cents* the ANNUAL REGISTER OF RURAL AFFAIRS—a few of the Illustrations from an article in which we venture to copy elsewhere, in order that readers may know what to expect from the rest.

For TERMS TO CLUBS, &c., please see last page.

The Best Doctor for Animals.

We have seen a great deal of doctoring for sick animals,—some successful, and a great deal of it unsuccessful,—and we have long since come to the conclusion that the most skillful physician we have ever met with is Doctor NURSE. If an animal, (as well as human being,) is not carefully taken care of,—nursed,—all the medicine in the world can do but little good. And, on the other hand, *with* good nursing, medicine is generally unnecessary. Our own observations lead to the opinion that in at least nine cases out of ten, as commonly administered, medicine does more harm than good.

An eminent New-York physician said that taking medicine was always a choice of evils—that being poisons in nearly all instances they necessarily did harm to the system, and were never to be employed unless there was a strong probability that they would benefit more than injure. This is not the rule adopted in doctoring horses, by most horse-jockies and others having care of these animals, if we might judge from the way in which gunpowder, salts, red-pepper, turpentine, whiskey, corrosive sublimate, and other violent remedies, are administered at hap-hazard, increasing in nearly all cases the violence of the disease. It may be laid down as a general rule, that it is much safer to give too little than too much medicine; and that none should be given unless we know distinctly how it is to operate and what it is for.

Some years ago, a valuable horse caught cold, and was troubled with a cough so severe that he might be heard half a mile, and which appeared to be rapidly reducing his flesh. We had an abundance of prescriptions from neighbors of all kinds of frightful medicines, enough to have killed him, had he been in perfect health. We concluded to discard all, and to place him under the attention of Dr. NURSE. Great care was taken never to work him to perspiration—he was blanketed whenever the weather was chilly—he was fed regularly and moderately on *succulent* food, all such food partaking of the character of expectorants, and favoring a free discharge from the lungs—and all his other wants were observed as well as we were able to, and promptly supplied. In six weeks he was perfectly well. Had some nostrum been employed, it might have injured him and prevented recovery; or if it had not, Dr. Nurse might not have been called in; but if he had, and the medicine had not greatly retarded his recovery, and he had got well in six months, it would unquestionably have been regarded as an extraordinary cure. At another time, a valuable mare, eleven years old, was badly sweenied by hard work—the worst case of sweeny we ever met with. It was generally regarded as a hopeless case—but various remedies were proposed and offered, costing from \$20 down to \$3. We concluded that our old friend Dr. Nurse should be again called to the exclusion of all these fellows, and the consequence is that with simply careful moderate treatment, the animal is well and the sweeny filled up.

The majority of sick horses get well; every owner tries some remedy; and that particular medicine that he happened to be using at the time, gets all the credit—although as a general thing it retarded more or less his recovery.

We must make one exception in the general rejec-

tion of medicines—there is one, which if given moderately can scarcely ever injure, and may often do much good. This is *powdered charcoal*—a powerful antiseptic, and absorbent of bad matter, while, unlike most other medicines, it does not irritate—a most important advantage. A clear illustration of this advantage recently occurred in the case of a fine calf five months old, which had become bloated by eating too many apples, blown down by a violent gale. Its sides became distended by wind to an almost incredible size; a solution of saleratus was poured down its throat repeatedly, and as often thrown out violently on account of its irritating action on the throat of the young animal. It continued for eighteen hours with little or no improvement, when a large tablespoonful of powdered charcoal mixed with half a pint of water was given. The dose was swallowed without any difficulty, and in four hours the calf appeared to be perfectly well. Charcoal may be given in nearly all cases of derangement of the digestion, whether with men or beasts, with great advantage. One-half to a teaspoonful is a full dose for a man, and as much more for an animal as its food exceeds that of a man.

We do not mean to say there are not other medicines that do not occasionally prove eminently useful; but unless they can be given understandingly,—with a full comprehension of their mode of action, and with an undoubted knowledge of the exact nature of the disease,—and their use sanctioned by very clear and distinct previous success,—it would be much safer to discard them.

Trees for Screens—Soil for Flowers.

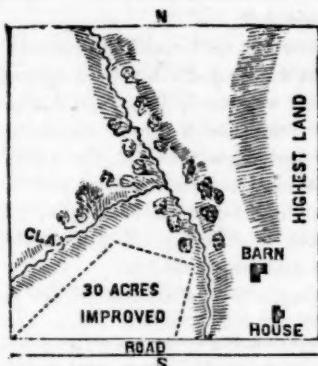
MESSRS. EDs.—I am laying out a flower garden. It is a red gravelly soil. What does it require to make it fit for the purpose?

I wish to set out a few trees. I should like something that would afford protection from winds, and at the same time ornamental—something bearing a blossom would be preferable—also a quick grower, and able to stand a stiff breeze. Please take into consideration our winters—24° below zero sometimes. A SUBSCRIBER. St. John, N. B.

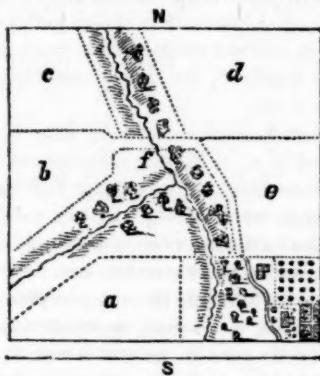
It is difficult to find a tree containing every requisite. We always prefer *evergreens* for screens. If there are any dense and rapidly growing native pines which our correspondent can procure from the borders of woods, (the *white pine* is one of the best if to be had,) he may easily transplant them by removing with them large circles of earth. If these cannot be had, procure from nurseries the *Norway spruce*, or the *Scotch* or *Austrian* pines, all of which are fast growers. Among deciduous trees, the *silver poplar* is perhaps the most rapid grower, and will form a good screen, if its numerous suckers are no objection. The European larch is nearly as rapid in growth. The *horse chestnut* and *mountain ash* are handsome flowering trees, but they are moderate in growth and do not become very large. The *Dogwood*, *Cercis* and *Catalpa*, are very handsome when in flower, but have thin foliage. The *red maple* is a good grower, and bears showy scarlet flowers. All these are quite hardy.

If the soil spoken of is not already fit for a flower garden, add plenty of old rotted manure, well seasoned compost, and swamp muck or black mould from the woods. The last named is one of the very best materials that can be found.

Laying-out a Farm in Kansas.



I send the above, which is about the way my 160 acres lie; it all slopes to the ravine; is black heavy loam, clay bottom; one place marked clay, is at surface or nearly so; that marked highest part, is a sort of swell on the rolling prairie, having quite a descent to the ravine. I think I might have a side-hill barn. You will oblige by laying out the fields, road, orchard, garden, &c. The ravine is a running stream most of the year—there cannot be a plow run through it. There is a little timber each side and brush-wood, which, if I keep fire out, will soon produce timber enough for fuel. I think of planting young cotton trees along the road; I have plenty of them. Shall I plant them alternate with black walnut? The timber is growing about as marked on the ravine. In the forks there is quite large timber. I would propose a field there, fenced in as timber field—but you will know best. JOHN DOY. Lawrence, Kansas.



We have endeavored to reduce this tract of land to a regular laid-out farm as above. The garden lies above and to the right of the house—if the land and view are suitable, we propose a lawn planted with shade trees, &c., on the slope below the house—which may be also used as a horse and sheep pasture. The orchard is above the barn. The field marked 'a' is entered from the public road—all the others through the lane, as represented. At 'f' there is a bridge—'b' and 'c' may be as one field if desired. Less land may be left along the ravine, if suitable. The fences between 'c' and 'd', and between 'a' and 'b', may be built only on one side of the ravine, if cattle could be excluded from the timber land. The nearer part of field 'e' might be divided off for a calf or hog pasture, if desired, by a fence running east and west. The entrance road to the house may also pass around it to the right, as convenience may require.

It will be observed that the lane or farm road is kept

nearly on a level, a most important requisite, although the fields, 'd' and 'e', entered from it, lie on the high ridge.

Butter and Butter-Making.

Looking over, in Secretary's FLINT's last Report to the Mass. Board of Agriculture, the awards of the Dairy Committee, we find appended a series of remarks by W. S. Lincoln, chairman, from which we condense the following:

Good cows, sweet feed, and pure water, are the first of all requisites to the manufacture of good butter. Good cows, that proper color and right consistency be secured—sweet feed and pure water, that no flavor be imparted to the milk which would render the butter unpalatable. Dependent, however, as is the quality of the article manufactured, upon the cow and the goodness of the food, a proper degree of care and skill on the part of the dairy-woman is of much greater consequence. Care that all the utensils of the dairy are kept dry and sweet; that the milk-room is well ventilated—of a proper temperature, free from dampness and the unpleasant smell generated by moisture; that the cream is not allowed to stand too long upon the milk, nor after it is skimmed; that it be churned at a proper temperature, the operation neither being hurried unduly, or carried too far; that it should be salted with the nicest salt obtainable, not injured by the addition of sugar or saltpetre; and that all the butter-milk be properly and effectually removed.

Butter is judged by its color, aroma, taste and consistency. Its *color* should be a delicate pale straw, not approaching white, and yet perhaps that is better than the deep orange tint, almost always sure indication of extraneous coloring matter. The peculiar *smell* always given off by the nicest butter is easily recognized. The better the quality the more delicate this aroma, while as the quality degenerates, about in the same proportion does the *smell* vary until it becomes positively offensive. This fragrance is dependent very much on the process of manufacture. Orange county dairy-maids make "Orange county butter" wherever they follow the same processes. The *taste* of the butter will betray any inattention to the proper care of either the milk, cream, or the vessels in which they are kept. So is the addition of any foreign matter, such as impure or too much or too little salt, sugar, or coloring matter. A certain amount of salt is necessary to bring out the true flavor of butter in its greatest delicacy. In texture or *consistency*, a greater difference was presented than upon any other point, in the lots examined by the committee. Some were waxy, leaving no mark upon a knife after being thrust into a lump, with hardly enough moisture to dim its brightness, while other lots were soft, leaving greasy streaks upon the blade, and large drops of an opaque liquid oozing from the newly cut surface. The existence of either of these signs, give sure indication of an imperfect if not bad process of making. The utmost moisture which should be found in thoroughly worked butter, is a very slight dew, and it should be of such firm, waxy consistency, as to slice down, hardly dimming the brightness of a knife-blade. No butter is properly made unless it will bear these tests.

We learn that Capt. H. L. SHIELDS of Troy, has recently made an importation of three full-blooded Leicester sheep.

Cost of Cutting Drains Reduced to less than One-half.

Among the many experiments we have witnessed in under-draining, on all tenacious soils or medium loams, if the work has been well performed, and good farming adopted, the cost has been returned in the increased crops obtained from the land, within three years. Two years is the most common period, but it not unfrequently happens in extreme cases, that the increase of the first year pays the entire cost. Besides this, a great saving is made by the uninterrupted work which may be done on drained land, its susceptibility of early spring tillage, and the greater ease of working a well pulverized soil. Cultivators are learning these facts, and are stimulated to exertions to effect this great improvement. But they are immediately met, and generally arrested, by the heavy cost required. It is only in unusually favorable soils that three-feet ditches (and none should be much if any less in depth,) can be dug by hand for less than thirty cents a rod. They should be as near together as two rods—making 80 rods or \$24 for every acre, not estimating the expense of tile, transportation, laying and covering, which would advance the cost to about \$38 per acre, where tile at \$10 per 1000, can be purchased within a few miles.

The writer has made many experiments with various ditching machines, with a hope of greatly reducing this heavy expense, and has at last attained the desired object in a considerable degree—so that ditches, costing at three feet in depth not less than 30 cents a rod in the hard clayey, tenacious soil operated on, have been cut for about 12 cents a rod; and it is believed that with the practical knowledge now attained, three-feet drains may be cut for 10 cents a rod, or at one-third the cost when done wholly by hand.

The process is a very simple one. A subsoil plow of peculiar construction, is so made that the draught-beam and handles may be successively elevated, as the ditch becomes deeper; with this plow and a pair of horses, the hard earth in the bottom of the drain, which is only loosened by the pick in the common process, is broken up, and all the hand labor required is throwing out this loose earth. This labor is performed with the common long-handled, pointed shovels, (as shown in the annexed figure,) and when the ditch has

Fig 1.

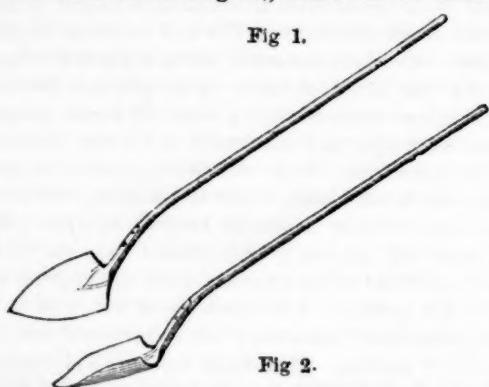


Fig 2.

been cut to about one-half of its intended depth, a similar shovel, with the sides bent up at a blacksmith's, to fit the narrow channel, is then made use of—(fig 2.) A very hard or stony hard-pan requires considerable dressing off with the pick, to prepare the bottom for laying the tile, but where the soil is more favorable, such dressing is scarcely necessary. One two-horse

team will commonly plow fast enough to keep from six to twelve men constantly shoveling, varying with the hardness of the soil.

In an experiment performed the present autumn in cutting drains a mile and a-fourth in aggregate length, a small portion was much intercepted with rocks and some quarry stone, with great numbers of smaller stones. Through these portions, the subsoil loosening plow could be used but imperfectly, and it was necessary to occupy eight days' work in quarrying, &c., and ten days more in dressing off these stoney and hard bottoms with pick and crowbar.

The following is the actual cost of 400 rods:

4 days with two-horse team,	\$ 8.00
35 " shoveling, 87½ cents,	30.75
10 " dressing bottom, &c.,	8.75
8 " quarrying rocks, &c.,	7.00
5 " laying tile and covering it,	4.37
5500 tile, 95 cents,	52.25
Drawing half mile,	2.00
Plowing in ditches,	1.50
	\$114.62

or 28½ cents a rod, completed.

Omitting the four last items, connected with the tile and laying it, the cost of merely cutting the drains is \$54.50, or 13½ cents a rod; or omitting the cost of quarrying the stone, and two-thirds of dressing the bottom, (this being confined to a very small portion,) the expense would be 10 1-5 cents a rod.

A part of the work was done during a severe drought, when the subsoil was very hard, and the loosening was consequently slower and more laborious. Earlier in the season, when the earth is softer, the loosening plow would do its work in less than half the time here required. This would be especially important where a fractious hard-pan exists. From one to six inches of earth are loosened at each passage of the plow. An "evener" or central whipple-tree, from five to seven feet long, is required, the horses walking on opposite sides of the ditch.

We are satisfied that most soils may be thoroughly underdrained after a little experience, and where tile is easily accessible, at less than \$20 per acre, the drains being three feet deep and two rods asunder; or that three feet ditches before filling may be cut for 10 cents a rod, and often somewhat less.

It is also very obvious that no complex machine can ever succeed as a ditcher, especially among stones, which constantly tend to jar and break it, but that the very simplest form of excavators must be adopted, which are easy to handle, light in striking stones, not liable to breakage, and easily and cheaply repaired.

Hardy Fruits.

MESSRS. EDITORS—What are the six best varieties of *pear on quince*, and *cherries*, suitable for this northern latitude, where the thermometer sinks to 20° below zero? R. M. S. Ottawa, C. W.

The following varieties of the pear, which succeed well on the quince, have proved quite hardy at the west, where the thermometer often sinks to 20° below zero, and they would doubtless do quite as well at Ottawa, where the young wood would probably ripen better: *Buffum*, *Tyson*, *Stevens' Genesee*, *Flemish Beauty* if double-worked, (one of the hardest of all pears,) *Osband's Summer-Lawrence* is very hardy, but does best as a standard.

The Dukes and Morello cherries are much the hardest sorts, as *Early Richmond*, *Mayduke*, *Kentish Belle Magnifique*, *Belle de Choisey*, *Morello*, &c.

Improvement of Grass Lands.

MESSRS. EDITORS.—The treatment of grass lands, or those that are designed for permanent mowing lands, seems to be engrossing the attention of farmers to a considerable extent at the present time, as the frequent communications in the various agricultural journals would seem to indicate; and I have been much interested and instructed in the perusal of the articles, in which the various modes of treatment for different kinds of soil, have been described by those who have successfully and profitably tried them. In those sections of country devoted exclusively, or in part, to grazing, this is a subject of vital importance, and deserves far more attention than it generally receives; and if farmers can be induced to give this branch of their business suitable attention, they will undoubtedly be much benefited by it. The practice has generally been to apply what little manure was made, to a few selected pieces of land, which are plowed from year to year, and leave the mowing lands to take care of themselves, with no means of renovating their exhausted energies except such as nature may have provided—and on the hills and mountains of New England these means are scanty enough. There are lands in this and most other towns in this part of the country, that have been mowed every year since they were cleared of the timber, which in some instances has been fifty years or more, which have never received any application of manure except what may have been dropped by the cattle which are allowed to roam over them spring and fall, to pick up what little grass escapes the scythe—and the scanty crops of inferior hay which these lands yield, speak with unmistakable language of the effects of this scourging system of husbandry, if it can justly be called by that name.

There is one kind of land, which more than all others has been considered past redemption, or incapable of improvement, viz: those lands that are too wet to plow either in spring or fall for the purpose of cultivation. These tracts of land lay level or gradually sloping, and the wetness is caused by springs in the land, or by water laying on the surface with no means of running off; in this condition they are of but little value, either for mowing or pasture, yet by judicious treatment and with little expense, they can be made to produce the largest crops of grass, and they are therefore our most valuable grass lands. On my farm there are several acres of this kind of land. It is a long level piece, bounded on one side by a steep high hill; on the other side the land falls abruptly down to a narrow interval, through which a stream of water runs; this piece of land is a little highest on the side next to the brook, consequently all the water which falls on it has to pass off by evaporation, and the soil being retentive, the water stands on the surface the larger part of the year.

A number of years since, I began to reclaim and improve this land in the following manner: In the fore part of September, when the land was dry, I plowed a strip on one end of the lot; it was plowed in narrow lands, plowing only on the sides, and driving round the ends of the lands; the object of this being to leave the center furrow through the land for an open ditch, which was deepened by going through it the second time with the plow, and then hoeing it out; this made a ditch about a foot deep.

The land was plowed in narrow strips across the

whole width of the field; this made ditches running from the foot of the hill to the brook, and leaves the land in narrow beds; this affords sufficient drainage to carry off the surface water. The furrows were turned as flat as possible, and afterwards a dressing of compost manure was spread on the land, and then harrowed smooth. The land was then seeded with herds grass at the rate of one-half bushel to the acre, and lightly covered with a bush harrow. The grass soon came up and grew well, and before winter there was a good coat of grass over the field. The first crop of grass was rather uneven, and the quality about like rowen. The first crop yielded one and a-half tons per acre. The next year the sward became thick and firm, and the crop of grass even, yielding about two tons of hay per acre, of a superior quality. This land previous to this, produced not more than one-half ton of hay to the acre, and that of a very poor quality. From year to year, as I have had time and manure to spare, I have reclaimed a portion of this lot, until the largest part of it has been improved. The result of this experiment has been very satisfactory and highly remunerating; and I think that the increased quantity and improved quality of the hay cut on this field, will pay a higher per cent. on the capital invested, than in any other improvement that I could have made in the same time.

On that part of the lot which I first plowed, the foul grasses now begin to displace the better kinds, and it will need to be plowed again soon; and as I go over with the lot again, I intend to put in underground drains where the open ditches now are. In this way I shall get rid of the open ditches, and leave the surface of the land smooth, and without any obstruction in cutting the hay or carting it off.

There are thousands of acres of land similar to this in Vermont, as well as in many other States, which might be improved in this way with but little expense, and which would afterwards yield a liberal income to the owners, besides adding much towards improving the aspect of the country, and setting examples worthy of being imitated; but which in their present condition are unproductive, either in good crops or good looks. C. T. ALVORD. *Wilmington, Vt.*

Sorghum and Imphee.

A western farming friend, enjoying good opportunity to judge in the matter, sends us the following estimate of the value, present and prospective, of these products:

Few crops grown by farmers, faster makes friends among them, than the Chinese Sugar Cane. In spite of the ill-natured remarks of unbelievers, and the discouraging reports of unsuccessful experimenters during the last year, a goodly amount was planted the present spring; and it has done nobly—returning a fine yield, when many other farm crops proved failures. Those who have doubted heretofore, believe now, and unbelievers are shaken in their strongholds.

Numerous mills have been erected, and in many places, individuals are offering to manufacture the present and future crops upon terms pronounced very favorable and remunerative by farmers; and many of them are deciding upon making this a standard crop, along with corn and wheat, and some are sanguine enough to believe that in "Prairie land" within half-a-dozen years, sugar will be made beyond the wants of

the population. The Imphee, or African cane, is receiving much praise, and it is reported will form sugar as readily as the sap of the maple. At all events, the success with these plants is such the present year, that hundreds of acres will be planted in '59, for every acre grown in '58. Experimenters will largely increase; we look for a generally favorable result. H.



Joice's Star Mill.

Farmers who use large quantities of ground meal for feeding their animals, have long felt the great inconvenience of carrying their grain to mill for this purpose, and dislike to sacrifice a portion for miller's fees, in addition to the labor of bagging, carting perhaps several miles, and returning for the load when ground, to be carted back. A cheap mill, driven by horses, which may be used at home, has therefore been long sought, and several have been constructed and introduced to some extent. We have recently given one of these a thorough trial, and are much pleased with its performance. It is *Joice's Star Mill*, manufactured by **HILDRETH & CHARLES** of Lockport, N. Y., and is regarded by many as the best of this class of machines, although some others have a high reputation.

The entire absence of cog-work or gearing, gives it a simplicity and freedom from friction, rendering the force applied to it of great efficiency. A stout horse will work it, but two horses are better and more efficient, and the labor they perform quite easy. It may be adjusted to grind fine or coarse, by simply turning a screw. The following periods of time were required to grind a bushel, in the experiments we have performed :

- 1 bushel of barley was ground in 5 minutes.
- 1 bushel of shelled corn was ground into fine meal in 10 minutes.
- 1 bushel of shelled corn was ground into coarse meal in 2½ minutes.
- 1 bushel of corn in cob was ground in 5 minutes.

The cob is ground very fine, and cannot be distinguished from the meal without close examination.

It will be perceived that the time required for grinding depends greatly on the fineness or coarseness of the meal; but for ordinary feeding, a two horse team will grind with great ease from 60 to 80 bushels of barley or corn in a day. By close driving, 120 bushels of barley may be ground in ten hours, and 240 bushels of corn into coarse meal. This will be far cheaper than the mere bagging and drawing to a common grist mill, and returning with the load, a distance of two or three miles, especially as the work may be all done on rainy days when men and horses have nothing else to do. Besides this, the toll is entirely saved.

The mill occupies a space of only a few feet in breadth, and the whole horse track may be under a

shed 25 feet wide, and thus admit its use in all weather. It is said that when adjusted by the screw, or set very coarse, it will serve as a good corn sheller, shelling a bushel in two minutes. We have not tried it in this way, but have no doubt of its success.

Its price, we understand, is \$54 for cash: for a farmer who grinds 500 bushels of feed in a year, it would save 50 bushels of toll, and in this way alone pay for itself in two years. Most farmers are however aware that grinding increases the value of the feed from 30 to 40 per cent., and consequently in grinding 300 bushels, its cost would be returned. The manufacturers assure us that 5,000 bushels may be passed through it without repairs, when the grinding surfaces require renewing at a cost of four dollars. This being the case, it may be used for ten years, with 500 bushels yearly, without renewal. This mill has in consequence of its value and efficiency, taken first premiums at several State and other fairs. It is one of those constant conveniences which no farmer, after having tried it for a time, would be willing to be deprived of.

Culture of the Sweet Potato.

To raise a crop of sweet potatoes observe the following rules:

1st. Select for that purpose, if convenient, sometime during the previous fall or winter, a piece of dry, rich sandy soil; and one if possible that has no garlic in it, for that is a choice food to a kind of grub worm which is often very destructive to the young sprouts.

2d. During the winter, or very early in the spring, it will be needful to provide heaps of compost on said land, at suitable distances apart, and at the rate of about 20 two-horse loads of compost per acre. A good compost is made of about equal weights of stable manure and marl; the manure should be placed in the bottom when the heap is first made, and when the weather begins to get warm in the spring, so that manure will ferment, the whole should be turned and thoroughly mixed together. In the absence of marl, perhaps swamp muck would be a good substitute, particularly if it has been improved by lying for a time under the cattle. Either stable manure, or marl or muck, or all together, may be very much improved by letting them lay for a time in the bottom of a pen where hogs are being fattened.

If the ground contains anything green, especially clover or garlic, it should be plowed in the fall or during the winter, as a precaution against the grubs, that the frosts of winter or early spring may kill a large number of them; for almost every one who is experienced in growing sweet potatoes has learned to his sorrow, that it is almost impossible to raise a crop of them where worms abound in the soil. Another reason for plowing early on this account, is, that such worms as are in the soil, may be starved out by keeping it entirely destitute of vegetation up to the time of setting out the plants; for these worms cannot live on nothing, nor on soil alone; and as the time for putting out the sprouts is not before the middle or latter part of May, after some weeks of warm weather, by that time whatever larva are hatched in the soil, would probably perish without food. But if there is much garlic about, the case is rendered almost hopeless, for the worms will resort to the white bulbs, and feed on them as long as they remain in the soil.

They are sometimes raised in hills, and farmed both ways, and sometimes in drills, when they are only cultivated one way; each way has its advocates, and perhaps each is the better way according to circumstances. With hills less manure is required for the amount of potatoes produced; with drills more potatoes may probably be grown to the acre; which way is attended with most labor, is probably a doubtful question. When grown in drills, the billing up, preparatory to setting out the plants, may be done with a plow, which is an item of some importance; they may be also readily dug with a two horse plow, by first taking out the coulter, with less injury by cutting than if done with a hoe. If it is intended they shall be dug with a plow, the last time the vines are loosened up in the summer, they should be left all on one side of the row; the vines of each two adjoining rows turned towards each other, so as to have them out of the way of the plow on one side of the row at digging time, when the potatoes should be turned out on the top of the vines. Otherwise they should be cut off to prevent them from choking the plow—which may be done with a scythe, stalk knife, or large pocket or pruning knife, which ever is found most convenient. If potatoes are raised in hills, they may be turned out with a plow in the same way, though the advantage is not so obvious as when they are raised in drills. When all things are properly considered, perhaps it will be found the better way to raise them in hills, which appears to be the most adopted in this section. A hoe for making the hills might be made out of a shovel blade, 7 or 8 inches wide, by 6 or 7 long, and attached to the handle by a short goose-neck and ferrule, similar to a potato drag; when attached in this way it gathers less dirt, and is consequently lighter than if made with an eye for the handle. For digging, the hoe should be a little narrower and longer, heavier or stronger, with an eye large enough to admit a handle that will not be liable to break in the operation.

About corn-planting time, or very soon after, the ground should be marked out in shallow furrows about three feet apart each way; or, if intended to raise them in drills, three and a half or four feet will not be too great a distance.

If planted in drills the manure may be spread through the whole length of the drill, and the plants set about sixteen inches apart; if in hills, about two quarts or a little more of compost per hill, will be sufficient, and it should be covered with dirt before it has time to dry in the sun.

When the plants are set, a little hollow should be left around each one, which may be easily made by pressing the dirt around it with the hands; then, if it is not raining, nor the ground quite wet, some water should be had convenient, on a wagon if not; otherwise, and about one-third of a pint applied to each plant as soon after it is set as may be. After the plants are set, the most important points are to keep the ground loose, and free from weeds and grass; (a grub worm can't crawl much on a loose surface, because the sand slips from under his feet,) about harvest time it should be hilled up pretty well round the plants with a plow, and after the vines have begun to run they should be loosened up occasionally with a small light pitchfork, to prevent them from taking root in the ground, in which case they would draw nourishment that would otherwise go to the hill. G. H. New-Jersey.

"My Experience" with Winter Butter.

"Winter butter" carries to most minds the idea of a white, bitter, unsavory article, as different from that made in June as two things bearing the same name can be. There are reasons for this—reasons in the management of cows and cream—but I am only intending to give you a bit of my experience in churning. The first winter that I kept a cow I had a day's job at churning—I remember it well, for there was considerable of the amusing as well as vexations about it—and I found out what the great trouble was—the cream was too cold. Since then, when I have anything to do with churning—and that "when" usually comes twice or more a week—I try to have the cream just warm enough. Then the butter comes in from fifteen to forty minutes, and in good condition too, if rightly managed.

To get the cream "just warm enough," various methods are practiced. The best way, to my notion, is to set the cream-pot in a warm room, and stir it occasionally. If in a hurry, set it in a vessel of warm water, and stir until it comes to the proper temperature. Do not melt the cream; if you do it will never make butter. It only needs to be warmed slightly—just so it feels a little warm to the finger. Sometimes, when I find after churning a while, that the cream is still too cold, I set the churn near the fire, leaving it (with occasional stirs) for a time, or more frequently, if in a hurry, I pour a little hot water into the churn, keeping the dash going all the while, so that none of the cream gets scalded. This operates like a charm—"my Dutchman," who yields the dasher of late, tells me "it is goot,"—as it often brings the butter in three minutes.

When the cream "froths up," or thickens up until it will float the dasher, you may be sure it is too cold. You may churn if you like, but "the mischief is in it," and the butter will refuse to appear until the cream warms. Possibly you may warm it by churning, but it is a great saving of time, patience, and "elbow-grease," to warm it some other way.

In the day's churning before referred to, the cream "frothed up" badly. We put in warm water—we set the churn in a tub of hot water—we tried it with a thermometer and thought it too warm, and cooled it down with snow, and churned and churned, and all to no avail. Finally setting the churn in hot water, we concluded to "boil it out," and then, with a few minutes churning, it came. The buttermilk fairly steamed with heat as we opened the churn to take out the butter, and was about blood warm, or so it seemed, and the butter soft and white enough. No wonder, after all the experiments tried upon it, and all the beating it had received—but we learned a lesson by which we have escaped all such trials since that day. We get our cream just warm enough at first, trying it with the finger (which is better than any thermometer,) and churning moderately on commencing, warm up as we proceed, and soon bring the churning to a close.

If one has good cream in winter, they can make good butter. To get the first, one must have good, well-fed, and comfortably kept cows, an even temperature to raise the cream, and churn often before it gets bitter or rancid. But I have already given you my ideas on this branch of the subject, (Co. Gent., Oct. 28, 1858.) There is more in managing the cream properly than most people think there is—especially those who keep but few cows, and give no great attention to the subject. I would renew my expression of the hope "that our dairymen will favor you with frequent communications of their experience." A YOUNG FARMER. Maple Hill, N. Y.

Draining—Shallow Reasoning.

A prominent writer in one of our most popular agricultural journals, gives an article of some length, the drift of which is, that underdraining is a very expensive operation, and in most cases not at all to be recommended. He estimates the cost of drains at over fifty cents a rod, and at forty-five dollars per acre, where the drains are two rods apart, which is the greatest distance at which the full benefit of the operation can be received. He then adds that it would cost at this rate, "five hundred millions of dollars to drain one half of the improved lands of New-York and Pennsylvania, the interest on which sum would be thirty-five millions of dollars annually. How is this to be paid?" "By the increased production of the land, if at all. But if you should raise additional products sufficient to pay this interest, you would glut every market in Christendom—then the products would bring next to nothing, and so the debt couldn't be paid at all! The simple fact is, a general system of draining would produce universal bankruptcy."

Let us look a little into these headlong statements. New-York and Pennsylvania have together about 20 million acres of improved land. Now, how much must the products of one half these acres, or ten million, be increased to "glut the markets of Christendom"—to "produce universal bankruptcy?" The population of Christendom is over two hundred millions of people; and to fill the mouths of this multitude, so that "the products would bring next to nothing," there should be at least double the present amount of food and clothing for them all. At any rate, when the crops are greatly increased by favorable causes, they do not glut the markets to any extent, nor reduce prices to "next to nothing." The improved land of the United States is some 150 million—the population 25 million—the surplus very small comparatively. Now, let us state the sum according to the rule of three:—If a hundred and fifty million acres are required to feed and clothe twenty-five million people; how much must the product of ten million of these acres (one-fifteenth part) be increased to reduce the prices throughout Christendom to "next to nothing?" To increase the food and clothing of each individual among the 200 million, but one-tenth, would require, at the same rate, an increase of products on these ten million acres, of not less than twelve times their present amount;—that is, where 40 bushels of corn are now produced per acre, it would be necessary to increase the 40 to 480 bushels per acre; wheat, at 15 bushels, would require an increase to 180 bushels; hay, instead of being two tons per acre, would have to be twenty-four tons per acre, and so on. Our own practice has shown a high profit from underdraining; but we have never placed it at such magnificent figures as these. But the question may well be asked, if *one-tenth* in increase would produce any important effect on prices, much less "universal bankruptcy."

We have not intended to be very accurate—but only to give an approximation to the supposed result far within legitimate bounds—accuracy is not required to meet such wild fancies as we have quoted.

But supposing that crops are increased as stated, we do not believe this result would injure, much less ruin the people—but on the other hand positively benefit them. We do not believe that making slaves of far-

mers—requiring their utmost exertions year in and year out, promotes general prosperity. If on an average, two days labor are required to produce a bushel of wheat, neither farmers nor the rest of the community are so well off as when a bushel is produced by half a day's labor. Hence, the introduction of agricultural machinery,—of the plow for the spade, the horse-rake for the hand-rake, the mowing machine for the scythe, &c., not only benefits the farmer, but the influence of his prosperity is felt through all ranks of commercial society. If this result should cheapen farm products, then the mechanic and merchant are supported on less, and as a consequence, sell more cheaply to the farmer. If products are *not* cheapened, then the farmer gets more for his increased productions, while the mechanic and merchant give no more for their food than before. In either case, increased or cheapened products benefit all.

The logic of the writer whom we have quoted, deserves examination in another point of view. He objects to underdraining on account of its great cost,—asserting that to drain all the improved lands in the Union would cost "more than the United States,—including every man, woman and child,—is worth." The same kind of argument would apply to all kinds of agricultural improvement. There is a great deficiency, for example, in good farm buildings in this country, especially at the west. Now, a complete set of such erections for every farmer in the Union, estimating their cost at a thousand dollars for every hundred acres of *improved* land, which would be within bounds, would require an expenditure of Fifteen hundred million dollars—yet what enlightened farmer doubts the propriety and profit of good farm buildings? Again,—the live stock of the Union has cost in raising, more than Five hundred million dollars—but does this great expense prove the folly of raising domestic animals on the farm? Take another example,—the fences of the whole United States have been estimated at a thousand million dollars—what would have been said, then, of the reasoning, if adopted fifty years ago, that it would be folly to fence our farms on account of this enormous cost? It would have been precisely that of the writer we have alluded to, with one difference, namely, that underdraining often repays more quickly its cost than fencing.

For, in such lands as draining has been found to benefit, the expense, if economically conducted, has been returned on an average in two years by the increased product and increased facilities for conducting cultivation. This has been our own experience—it has been the experience of JOHN JOHNSTON of Geneva, who has underdrained his whole farm—and every one who has adopted a good system of farm management in connection with draining, with whom we have conversed, has stated to us similar results. The improved appliances lately adopted for lessening the expense of the operation, enables us to do it at half the expense estimated by the writer above quoted—but even admitting that thorough underdraining costs forty dollars per acre, it will not require \$4000 capital to under-drain a whole farm, as would appear necessary at first sight. John Johnston has proved that with \$500 he can drain any farm—in the following way: This sum will enable him to drain at first twenty acres; in two years, or at furthest, three years, the whole \$500 will

be returned to him in increased crops, enabling him to drain twenty acres more. The forty acres now completed, will return the third \$500 in one year, when this capital is again applied, and so on till all is done. To estimate, therefore, the cost only of draining, without its returns, as this writer has done, is like the reasoning of the man who should argue against all farm labor on account of its cost—amounting, as it does, in the entire Union in a single year to about one thousand million dollars—and in ten years to a *million million*, "more," to use the words of the quoted writer, "than the United States,—including every man, woman and child,—is worth."

Such superficial, one-sided reasoning—reckoning the expense only, and leaving out the profits—may be used in favor of any position. We are satisfied that nothing is more needed in a large portion of our country for successful agriculture, than underdraining, and we are unwilling that any check should be given to it by such fallacious argument. There are many farming districts where it is not needed—where, for example, there is a porous gravelly subsoil, or where the soil itself is light and sandy. But in all clayey regions, or with a soil more or less tenacious—or where an impervious hard-pan subsoil exists—and in short wherever water is found to stand some days in post-holes dug in such soils,—underdraining will unquestionably prove highly beneficial. The propriety of adopting it extensively on such soils, is only a question of time—that is, where its increased products are small, or their prices low, a longer period must be given to effect it over the whole farm, by paying its own way

Composts—Muck and Night-Soil.

Chemical analysis, as well as actual experiment in the field and garden, have shown the great manurial value of human excrements and urine—a value very often wasted for all practical purposes. According to STOCKHARDT, the composition of human excrements, when derived from an invigorating but moderate quantity of animal and vegetable diet, may be assumed to be the following:

	1,000 lbs. fresh excrements.	Of fresh urine.
Solid substances in general,.....	250 lbs.	40 lbs.
Nitrogen therein,	7 "	10 "
Mineral substances therein,	16 "	11 "
Assimilated alkalies (potash and soda,)	3½ "	2 "
Earths, (lime and magnesia,) ...	5½ "	1½ "
Phosphoric acid,.....	5½ "	1½ "
Common salt,.....	1½ "	2 "
Approximate value,.....	114	118

"Very accurate analyses," he adds, "have shown that the amount of urine" (voided in any given time, compared with the solid feces,) "contains double the quantity of phosphoric acid, four times as much azotized substances, and six times as much alkalies and alkaline salts." The proportionate value is as 9 to 2½, and the former deserves far greater care in collection, though it is most frequently allowed to run to waste.

"The soil procured from vaults upon country farms," says the author above quoted, "is most judiciously added to heaps of earth or compost, as it then soon loses its disgusting odor, and is converted into a pulverulent mass, which when mixed with earth can be easily scattered and equally distributed over the ground." Swamp muck, first dried, is one of the best absorbents and deodorizers which can be employed.

Night-soil, on the other hand, is one of the best materials for decomposing and sweetening raw or acid muck, and the two together enable the farmer to manufacture a large amount of very valuable manure.

The subject has received considerable attention in former volumes of this journal—(practical directions in regard to collection and preparation of night-soil may be found in vol ix, p 345,)—and we only propose to cite an example or two of its employment. Mr. Brown's essay on swamp muck, relates of a gentleman, who in making a pond of a sunken place in his park, first pumped out the water, and then hauled out two or three thousand loads of muck, which he piled up in an oblong pile, three feet thick, leveled the top, manured and sowed on grass seed—raising two or three crops of grass thereon annually, and hiding what would otherwise have been an unsightly object. For many years this bank has been drawn upon with unvarying success—both for composting with night soil, and the common manure of the farm.

Small quantities of night-soil are obtained from a neighboring village; this is deposited at one end of the muck bank, when the latter is cut down perpendicularly and spread over the former, keeping the whole in a compact form. At short intervals, stakes are inserted in the heap, to be withdrawn after a few days in order to learn the degree of fermentation from the heat evinced. When the mass is sufficiently "cooked," it is liberally applied to the land (being about nine-tenths muck) and is followed by the most abundant crops of oats, corn, wheat, and fruits. "A large fruit and flower garden is kept in the most luxuriant condition, mainly through the influence of discounts from this bank." Rare and beautiful exotics, figs, peaches, apricots, plums, and shrubs in great variety, all find in it that aliment, which with proper protection, returns the proprietor ample compensation for the care bestowed."

With little trouble or expense every farmer might secure fertilizing material of much value—better far than most of the commercial manures. In regard to one form of the latter—"poudrette"—if made at home, we may be certain of its value. Even Stockhardt found it necessary to warn his hearers against the purchase of dried human excrements under this name, without knowledge of their constituents from analysis—remarking that they were of extremely diversified composition. When our farmers, as a general rule, avail themselves of every fertilizing material of domestic production, there will be little need of going far for manure. Muck is so plentiful—its conversion into compost so simple and inexpensive—and its judicious employment so profitable—that we shall continue to urge it upon the attention of our readers.

Winter Food of Milk Cows.

A writer in the *N. E. Farmer*, Mr. Pierce of N. H. says "it is well understood among our thinking farmers that green, early cut hay, or rowen, is the best fodder for producing milk in the winter months, or as soon as the grass shall have failed us." Feeding upon the frosted grass late in the fall will "invariably give the cows a back-set. A resort to wheat-shorts and corn-meal is the only remedy in this case." He advocates a change in farm husbandry, by which meadows and pastures shall receive much better attention and produce much better results,—a change which it were wise to introduce everywhere among Eastern farmers.

Destroying the Peach Grub, Wooly Aphis, &c.

MESSRS. EDITORS—I have a young orchard of peach trees which are somewhat injured by the worm at the collar. The trees are of one and two years' growth. Would the application of three or four quarts of boiling water or soap suds to each, kill the worm without injury to the tree?

I have some young apple trees of the same age with the peach, and also some just budded this season. They are attacked by the wooly Aphis. Would the application of boiling water or suds to them be of service without injury to the tree? If not, what is the best remedy? I tried sulphuric acid diluted, as recommended by Downing. It killed the Aphis, but it also killed the tree.

I have heard of the application of boiling water to the roots of peach trees of some age, and that it has proved of great service—is the reason of my inquiry—but I am afraid to venture without hearing something further on the subject.

I have heard of an instance in which boiling soap-suds thrown under a plum tree was followed by a large crop of plums—probably killing the curculio. I have thought the notion a good one.

Mr DICKINSON spoke in one of his communications, of making manure for his land by burning turf. What is the process?—how is the burning managed? ENQUIRER.

Hot water dashed around the bottom of a peach tree will not injure the tree, provided it has an opportunity to run off immediately, before it heats or cooks the bark to the wood, which would require some time, as the bark is a slow conductor of heat. As the grub only works in the bark, it is not improbable that it might be killed by hot water, without danger to the tree, if we knew the precise amount of time required to effect this object. It is so much easier and safer, however, to cut them out with the point of a knife, that we have always adopted this mode, and never have employed the scalding process. An active man with a knife will clear several hundred trees in a day.

The wooly Aphis may be removed by the use of soap-suds. Whale-oil soap is more commonly used on account of its cheapness, and is by some regarded as more efficient. Boiling water would kill the tree applied thus to the more tender and growing part.

No doubt boiling soap suds might be used to destroy the curculio, if applied just at the commencement of the puncturing season, when the insects are emerging from the soil, but it would obviously require a very large quantity to accomplish their complete destruction. For example, a pail holding three gallons of the boiling liquid, if discharged over a whole surface ten feet in diameter, would form a stratum only one-sixteenth of an inch deep, which would of course be instantly chilled before it could effect anything, and be wholly insufficient to penetrate the soil with its heat two or three inches, the supposed depth at which the curculos exist. Those only just emerging would be reached, and the process would therefore require many repetitions.

We should esteem it a favor if A. B. DICKINSON would furnish a particular account of his mode of burning turf—which may differ from the common mode of mixing it with brush, rubbish, &c., when very dry, and reducing it by a slow fire.

Why is the Bonchretien more like a span of race-horses than the Seckel? Because it is the *courser pair*.

Illustrations in Chinese Agriculture.

Extract of a letter from Rev. S. W. Bonney, missionary of the American Board in China.

MACAO, CHINA, April 1, 1858.

LUTHER TUCKER, Esq.—When I saw you in July, 1856, I mentioned that I would send you some plates describing Chinese agriculture. On account of the war, I was not able to go to Canton where they are sold. Canton being now in the possession of foreign troops, there is admittance to the city for foreigners. A few weeks since I went up, and during my stay of five days purchased a few books.

I send two copies of a book on the cultivation of rice, and manufacture of silk, which please accept as a small addition to your agricultural library. As soon as the treaty is made, we hope to travel in the interior, and see more of the agricultural systems of the Chinese, while we teach them that system of religion which their Maker has revealed in the person and mission of Jesus Christ, their only Savior. I doubt whether much can be learnt from the Chinese mode of agriculture that will be applicable in our country. The Chinese farming is more like the cultivation of large vegetable gardens, because the density of the population requires them to make the most of the soil that is possible. In our country there is abundance of land, which need not be used penitiously. Our country abounds with hills, mountains, and valleys, and is not intersected by a net-work of streams and canals as will be found in China. SAMUEL W. BONNEY.

Mr. BONNEY will please accept our thanks for his interesting present. Although we can scarcely hope to profit much from the descriptions accompanying the plates—as the Chinese have a singular way of beginning their books at the last page, and using a little different kind of characters from those generally in vogue where English is the language spoken—he has been kind enough to add a heading in manuscript to the plate pages, so that their meaning is perfectly clear, and we may have some of the pictures they contain engraved for the benefit of our readers.

Seed Wheat from the South—Corn from the North.

In the Co. Gent. of Nov. 4, page 282, appears the theory of an anonymous correspondent, signed J. W. C., to prove that the north cannot hasten their wheat harvest by the use of southern seed. As one single fact is worth all the theories ever printed, I will state some facts in growing wheat and Indian corn.

In August, 1856, I determined to make an effort to ripen my wheat crop in time to escape rust, the most fatal disease to our wheat in this section of Kentucky. My location is in the extreme northern part of the State, in latitude 38° north. The soil strong, calcareous uplands, dry and very productive. I sent to Nashville, Tenn., for three bushels of "Early May Wheat" for the experiment, and sowed it on hemp stubble Sept. 15. Nashville is in latitude $36^{\circ} 12'$ north 2° south of my location. The experiment was a decided success, my wheat ripening June 14th—just two weeks in advance of our acclimated varieties, and free from all disease—straw as bright as gold—and surrounded by rust of the worst character in all the later ripening kinds. And this early ripening continues to the present time. This year 250 acres were grown from this small beginning, and all yet free from disease, and weighs this year 62 lbs per bushel, when all the later kinds, from the effect of rust, weigh from 54 to 57 lbs.—much shrivelled and unmerchantable. The

entire crop of 250 acres has been sold for seed in this county, and is now well disseminated. All efforts to ripen our wheat early by sending north for seed, have signally failed in actual experiment, and always will fail. The ripening of the crop in any given latitude can be hastened only by sowing seeds from a more southern latitude. I have removed an early wheat $2\frac{1}{2}$ ° north, and it is now ready to go $2\frac{1}{2}$ ° farther north, which would take it up to about the latitude of the line between New-York and Pennsylvania. For me to say that it would succeed if taken there, would only be theory. The proper way would be to test it. If tested, I shall not fear the result.

Now for the Indian corn. Last year our farmers suffered severely from soft corn, owing to late ripening and early frost. Opposing theories prevailed. Says A. if we want to ripen our corn earlier, we must send north for seed. Says B., we must send south. And consequently A. sent to New-Jersey and purchased the 8-rowed yellow, and B. sent to Nashville and got the southern gourd seed. These northern and southern varieties were cultivated side by side in this latitude this present year. The northern proved itself the earliest ripener, being in good feeding order by the 15th August. The southern proved a very late ripener; thus in practice proving the reverse of the wheat experiment, and demonstrating that for early ripening of Indian corn in any given latitude, the grower must go further north. The views of C. M. CLAY, as expressed in the Co. Gent., that for early maturity in corn, go north for seed, and for wheat, go south, are absolutely demonstrated, independent of all theories. Why it is in practice that the same rule will not apply to both cereals, I will leave for the theorist to explain as best he may. ANTHONY KILLGORE. Mason Co.,

Point Judith Bronze Turkeys.

Mrs. COUNTRY GENTLEMAN—A short and hastily written article of mine on turkeys, having been copied from the "Dollar Weekly Newspaper" into the "Country Gentleman," has made me most suddenly and unexpectedly the subject of a very extensive correspondence; and as I may be subjected to still further queries, and your paper having such an extensive circulation, I will, with your permission, answer through your columns all that can be said or written on this subject.

The turkeys raised by me are the Bronze turkeys of Rhode Island, or more properly that part of R. I. called Point Judith, where large flocks of them were formerly raised. Their color is similar to the wild turkey, from which stock they have undoubtedly been very closely bred, and kept remarkably pure for a great length of time, until they have lost all their wild nature and are the tamest and most domestic of fowls. Far as my research has led, and I have been a breeder of choice stock for many years, they are the largest, noblest and hardiest of all domestic poultry. The plumage of the cocks is the richest bronze green, as changeable as a peacock. My old gobbler weighed last spring, not fat, $28\frac{1}{2}$ lbs.; hens, not the largest, 18 lbs. I have from different hatchings, raised about ninety this season, and young cocks running about unfed, weigh now, alive, 18 and 20 lbs.; hens 12 and 14 lbs. These young birds will easily fatten by Christmas—cocks 25, hens 18 lbs.; but the best plan is to keep these young cocks

a year, and then they will fatten 25 lbs. dressed. I find no difficulty in raising most of the number hatched, on the plan stated in the "Dollar Weekly," i. e., plenty of nice fresh curds, fed several times a day when first hatched; as they grow older, plenty of cracked corn, dry.

When my hens begin to lay in the spring, several will often lay in the same nest. We bring in the eggs every day, and when one hen shows a disposition to set, we take her to the barn, and in a dry, sheltered corner put up a few lath to confine her in, and in a box give her 15 eggs; and so on with the rest of the hens as they desire to set. In this way the turkeys are protected from storms, the eggs kept dry, and nearly every egg is hatched. When all the chicks are out, a crate is provided with a tight top or roof, and the old bird confined, allowing the chicks to run about. After the young have become fattened, the old birds can be turned out; and if they have an extensive range with woods, they will require but light feed once a day, until they come up about the barns in October, when, to get great size and weight, they must be highly fed on grain.

This strain of turkeys bring high prices for breeding, in this vicinity. I have paid six dollars for a gobbler, when I wished to change the strain, and I have a famous gobbler now that twenty dollars would not buy.

There is just as much difference in fowls as in other stock, and their good points can be just as easily brought out by judicious selections and crossings. After many years' trial I am satisfied with Point Judith Bronze turkeys and the best Grey Dorking fowls. P. W. HUDSON. Manchester, Ct.

Mrs. CULT & CO. GENT.—I enclose two recipes which I have found very useful in my family, hoping that they may prove equally so to some of your readers. If you find them acceptable, I may from time to time, give to inexperienced housekeepers, through your columns, some suggestions of which I should have been very glad, when I commenced my duties as the mistress of a family.

A Plain Pudding.

Six ounces of flour, a half pint of molasses, a half pint of whortleberries in the season for them, or Zante currants in winter, one small teaspoonful of saleratus, a little salt, and one egg. A piece of suet the size of a small egg, is an improvement, but not necessary to make an excellent pudding; boil in a cloth an hour and a half, and eat with any sauce that is preferred.

Soap for Chapped Hands, &c.

Take one bar of yellow soap; cut it up small; add to it the gall of a beef; put it over the fire until the soap is entirely melted; (a farina kettle is the most convenient vessel to melt it in;) then add one ounce of fine pulverized saltpetre and one pint of alcohol; pour it into a vessel (previously greased,) of a size to make the soap at least one inch thick. When firm enough to cut, before it hardens, cut it into cakes of a convenient size. This soap will be found excellent for taking grease spots out of woolens and silks, and is a capital preventive of chapped hands.

[Our correspondent will accept our thanks for the above, and the assurance that we shall be pleased to receive the suggestions to which she refers. We will add that contributions to this department of our paper, from our lady readers are always very acceptable, and we wish more of them could be persuaded to write for it.]

Wintering Calves—Costiveness.

It is not difficult to winter a healthy calf. Good hay, shelter, water, and daily care is all that is necessary. But that care must be founded on considerable knowledge of the animal economy, if we would keep all the functions of the calf in correct and healthful action. During our rigorous winters, it is frequently thought necessary to give calves a small supply of grain, which usually has a tendency to bring on disease rather than prevent it. They are almost certain to become painfully costive in mid-winter, and then need some aperient drinks, or what is better, succulent food, like roots or fruit. Every calf in our northern climate should receive during the winter at least one carrot, turnip, or beet, per day, to keep its bowels in good order. If nothing else offers, give them potato and apple parings, cabbage leaves, and the like—at all events give them a larger cash value in roots than grain, and note the result.

Any observing farmer has seen abundant evidence at this season, in the droppings of his calves and their daily loss of flesh, that they were not in health. The means usually adopted to remedy these evils too often but increases the cause, and though the animal may be wintered, it will be at a much increased expense over the proper way. Were we to prescribe remedies for loss of flesh, the pest of lice in calves as well as costiveness, we should base every dose on roots—green food in some form. But costiveness, prevented or cured, the other evils are seldom known.

In summer and autumn also, costiveness should be guarded against. A change to fresher pastures, if possible, is one of the best remedies in the case. It should be remembered also that it is important to bring them in good order into their winter quarters, for "an animal well summered is half wintered."

Voluntary exercise is beneficial—we always consider it an omen of health and thrift to witness a playful habit in calves during the winter, and would provide in all cases a sheltered, well littered yard, and allow them access thereto a portion of every day not excessively stormy.

Raising Large Crops of Corn.

If I wanted to see how large a crop of corn could be grown on an acre of land, I would like some of the small varieties—probably the "King Philip"—and put it in drills two feet four or six inches distant, and on an average one kernel every 4 inches in the drill. I would take some of the warmest loam resting on clay subsoil that had been in clover two years; would make the drill marks with a corn plow of a good depth, and would then proceed to fill the drills with well decomposed compost, not less than 30 loads per acre, and thoroughly pulverized in the drill. I would then cover the manure with one inch of soil before dropping the seed; and finally, in covering the seed be careful to see that all the manure is well under cover. The culture throughout should be three dressings, both with horse and hand-hoe.

Now, Messrs. Editors, please tell me where I err in the above programme, as I have no doubt I do.

For very strong land, highly manured, is it too thick—as you know the Philip has quite a small, low stalk; and would you not prefer this to a larger variety, and

a greater distance apart? I am fully "open to conviction" W. J. PETTEE. *Salisbury, Ct.*

Our opinion accords nearly with that of our correspondent. We have raised more corn per acre, side by side, of the King Philip than of larger sorts, provided the former was planted close enough to compensate for its small size; but so much smaller was its stalk, that every farmer on seeing the crop confidently but erroneously pronounced the larger corn much the most productive. We have observed several instances of this mis-judging, where accurate measuring was not resorted to. We are inclined to think that 6 inches apart in the drills would be safer and better than 4 inches, but would like to see both distances tried and the result reported. Drills 2½ feet apart, and 6 inches in the drill, would give about as many stalks per acre as hills 3½ feet apart with 10 stalks in the hill—which would be a great number, and if every one bore two good ears, the crop would be heavy. Unless in the richest soil, even this would be close planting.

We perceive no necessity for covering the compost with the inch of earth.

We would cultivate the drills with a horse hoe once a week from the time the corn was up till too large to admit the operation; and with the hand-hoe only often enough to clear the weeds. Because horse cultivation is ten times as efficient and useful for the same cost, and the oftener repeated the better.

The Horse—His Education.

"Behold, we put bits in the horses' mouths, that they may obey us; and we turn about their whole body."—JAMES, iii., 3.

Perhaps no animal has been bred with more care or greater skill than the horse, and, as a recent author says, "it is very strange that his education has been so shamefully neglected." How often do we see horses whose actions show that they were badly handled, and that they have received bad management since. Some will not stand while a lady is getting in or out of a carriage; others will not back a carriage—or if they do back it, they will start and run back two or three rods; others will not obey the reins without considerable resistance; others want to run down hill and go through numerous movements; showing plainly a bad system of education, and being a living monument of shame to the man who trained them. Training horses—like any other branch of domestic husbandry—has been done with little or no regard being given to the best way of doing it, or that most in accordance with reason and humanity.

The horse was supposed to be deficient in intelligence and practical instinct, and was therefore used simply as an animal devoid of any feeling of reason and judgment. The system of education or training given to him, has been a hard and an unjust one. He has been *licked* and *driven* to perform everything, and if he did not do it, has been beaten for that. His masters have in many and almost all instances, regarded him as not capable of knowing and appreciating a kind act; consequently they force him against his will to do every service they require, whether contrary to the animal's principles of instinct and right or not. A man of my acquaintance went out one morning to catch his horse, which he did without any difficulty; but seeing a gap in the fence that wanted putting up,

he loosed the horse and mended the fence. After this he had some trouble to catch him again, as the horse had no idea of being fooled in that way, but at last he succeeded; and when he did get him, he was going to pay him for his contrary behavior, and so gave him a pretty severe whipping. The consequence is that now when he goes to catch his horse, he carries a handful of salt or a dish of oats, and then very often has a hard time of it. Now, in which was reason the most lacking—the horse or his master? I have a horse, and whenever I go into the pasture to catch him, if he sees me, he meets me half way. I carry no oats, I take no salt. Kindness is the only thing I use.

In educating the horse, let us first educate his master; this done, we can proceed. A writer on the horse, and his manner of being trained, says: "Those who are stupid enough to wonder whether the horse thinks or reasons, can never successfully manage him, from the fact that they can't comprehend him. The first step, then, in educating the horse, is to educate the teacher in regard to the instincts and general characteristics of his pupil; and the very first chapter in this lesson, and the essential one of all, must concede the fact that the horse is a thinking and reasoning being. He and his teacher think differently and reason differently, because one is governed more by instinct than the other; but no man will ever be successful in training the horse, if he doubts that he both thinks and reasons."

This done, this point admitted, and the master wishes to appeal to the thinking and reasoning faculties of the horse—so to speak—or to his natural instincts, of which, as I have said before, he possesses more than any domestic animal.

The education of this animal should begin with him when a colt. It always seemed to me to be very inconsistent and impracticable, that while farmers handy their oxen when steers, and train them to the yoke and the cart—they should neglect their horses until three or four years old, and then break them; and ten chances to one if their constitution or their necks don't get broke at that. It would injure the constitution of the colt a year old to put harness on him, and train him to that, no more than it would to yoke steers at the same age, and handy them as all good farmers do. The common idea that it makes them unspirited and mulish, is absurd and incongruous. The colt should be trained to the harness, and at the age of three or four years, when in full vigor of strength and activity, he should be completely disciplined—though not put to hard work or constant service; but at the age of four years farmers should work a colt as much as they work a yoke of steers of the same age.

Let the law of kindness govern all the actions of the master in the education of his horse; if this is done both will have better feelings, and the horse will have a stronger attachment for his master. If the whip is to be used, let it be used at the proper time—but be careful in its use. The horse knows the will of his owner, and if he does not do it he expects a punishment. If he receives this once, or even twice, it will lead him to obedience, provided that when he does obey he is kindly treated for so doing. Of all the most cruel practices, that of licking a horse for doing or not doing a thing, after he does or does not do it, is the most inhuman. If you want your horse to go and he does not, and if after coaxing he refuses, then use

the whip; but after he begins to go stop—don't lick him then because he did not go before, for he will know that you are licking him without a cause and as a punishment; when in fact if he begins to do what you want him to, why inflict a cruel and inhuman law of punishment?

I think there is often a wrong import put upon the word *break*. As has been well observed, we need to "break" a colt of nothing but his bad habits, and naturally he has but few of these—bad management has given him the rest. We do not "break" a horse to the harness, any more than we break a school-boy to grammar. The horse wants teaching, and being attached to man, it is natural for him to obey and love him.

Let love have full sway; let the law of kindness and humanity be your guide and teacher; acknowledge the horse to be a thinking, reasoning, and intelligent animal; and with gentleness and patience you can teach and train your horses, without paying five dollars for a bogus receipt, or fifty cents for some worthless pamphlet. S. L. BOARDMAN. *Brookdale Farm, near So. Norridgewock, Maine.*

Culture of Oats.

MESSRS. EDITORS.—Your remarks on the culture of oats, have led me to give you the way we raise them in this part of Connecticut. We take land that has been cropped the year previous with corn, potatoes or buckwheat—the corn and potato ground manured before planting. We sow oats the first thing in spring, as soon as the ground is dry. Some farmers I think are a little too early, sowing before the heavy rains in spring, which leaves the top baked by the sun. I have seen fields where the seed did not all germinate—whether from exposure to the cold wet ground or from the baking, I know not. But there is one error that all farmers should rid themselves of—that is plowing too shallow. They have the notion that by plowing in the seed, the oats will stand dry weather better than by plowing to the depth of seven or eight inches, and then harrowing in the grain, which is my practice. If plowed twice it is not skinned over the top of the ground, which must be the case if the seed is covered by the plow. The product on land manured the year before, is from 40 to 80 bushels per acre. Never practice sowing on inverted sod, and never manure for oats. Have sowed with plaster, which I think did well. J. H. B. *Newtown, Ct.*

To the Transmutators of Wheat.

EDS. CO. GENT.—I have a piece of land that has been in my possession for twenty-five years, and during all that time there has never been wheat sown upon it till 1856, nor do I believe there was any wheat sown upon it since it was cleared. In the fall of 1856, one-half of it was sown in wheat and the other half in rye, and laid down with timothy. When the grain was cut last year, there was a great deal of cheat in both lots—as much in the rye as in the wheat, and this year as much in the timothy as in either wheat or rye. Now I want to know that if wheat transmutes, what objection there is to rye, or even timothy, to transmute. There is one thing certain—that part of our fine cheat crop did not originate from wheat. PITTSBURGH.

How to Manage a Fifty-Acre Farm.

MESSRS. EDITORS—This question is asked by "A FARMER," on page 299, vol. ix of the COUNTRY MAN. I have long looked for an answer from some one who believes farming so profitable, believing it would oblige many other farmers as well as himself. I cannot give him the required information, but will renew the inquiry. In the first place, I think \$60 per acre, for 50 acres that will produce 50 bushels of corn and oats per acre, and 15 bushels of wheat per acre yearly, near a good market, quite low. The sales, as he reports them, amounted to \$485, without allowing anything for bread, seed or feed. These would lessen it \$200 at least; this would leave him \$285, and he expects his interest, taxes, and farm bills to amount to \$700. This would leave him \$415 behind. Profitable business, truly! Will some one explain how he is to make up the deficiency? J. W. LEQUEAR. Frenchtown, N. J.

We are gratified in being able to transfer to our pages, in answer to the above, the following article from a recent no. of the "Dollar Newspaper." There is a strong contrast between the products of the two fifty acre farms—the one amounting to only \$485, while the other rises to \$2,232.84. The owner of the former, we may venture to say, did not find "farming profitable," while the owner of the latter, it would appear from the following statement, with a capital of but \$600 to begin with, has in twelve years time made enough from his fifty acres to enable him to erect new buildings and new fences, and to pay the entire original purchase money and interest, with a surplus of over \$5,000 to loan. How this was done is told in the following article:

I have a little farm of fifty acres of land which I own and occupy, and in the enjoyment of which I am as "happy as a king," and would not, if I could, exchange situations with the highest dignitary in the land, not even the President of the United States. The cultivation of this farm affords me employment of the most interesting kind, and exercise for both mind and body, alike pleasing and healthful. My farm buildings are plain, but convenient and substantial, and are located near the centre of my grounds, on an enclosed plot of land, containing about two acres, occupied also as a garden and fruit yard. I have now growing, and in bearing condition, in my fruit-yard on this plot, fifty apple trees of the best variety, ten standard pear trees, ten cherry trees, twenty plum trees, thirty peach trees, three apricot trees, two mulberry trees, six quince trees, one chestnut tree, one walnut tree, two filbert trees, a row of currant bushes, a row of gooseberry bushes, a row of raspberry bushes, and four grapevines. I have also a moderate sized lawn in front of my dwelling, containing a number of shade trees, and also embellished with a few fine specimens of flowers and shrubbery, arranged principally along the avenues.

Twelve years ago I purchased this property for five thousand dollars cash, (the whole amount of which was kindly loaned me by a friend,) and commenced my farm operations with only six hundred dollars cash of my own money. With this six hundred dollars I stocked my farm with two working horses, three milch cows, three yearling heifers, six shoats, twenty barn fowls, a two-horse farm wagon, a plow, a cultivator, a harrow, a fanning-mill, cutting-box, &c., and purchased my horse feed and flour for bread on credit for the first season. The fences were all very poor, and the buildings old and dilapidated. These buildings I have since torn down and erected new ones near the centre of the farm, as before stated, and have my fields now enclosed with good post and rail fences.

In the beginning of my farm operations I adopted the following system of rotation of crops and general farm management, and have adhered thereto strictly up to the present time, and, by my success in the business, have been enabled not only to repay my friend the money he loaned me, but in addition to this, have had the means to return him the favor, by a loan of a still larger sum, which

has enabled him to avoid a heavy sacrifice and survive a misfortune which otherwise would have crushed him.

To return to my subject: I divided my farm into four fields, of twelve acres each, in one of which I planted corn, and at the last dressing of the corn sowed clover seed over the land, at the rate of about one bushel to five acres. In the other field I sowed oats very early in the spring, and, at the time of seeding the oats, sowed over the field four bushels of grass seed, timothy and clover mixed, and of each about an equal quantity. In one other field I sowed winter grain, principally wheat, and over this field sowed, in the following spring, about three bushels of clover seed; and one field I kept for grass and hay. I plant my corn on the wheat and rye stubble-field early in the spring, and manure the ground plentifully before it is plowed. I have always considered the sod of young clover, which I plowed in with the manure, a great benefit to the corn crop. My wheat I sow on clover sod after two plowings, the first plowing deep, the second shallow, and after the first plowing apply to the land, a coat of lime and a heavy dressing of manure, and harrow both in together previous to the last plowing. About the 10th of September I sow my wheat and harrow in. By this mode of management, I have the benefit of young clover sod for my corn, also for my oats, and an old sod for my wheat; and I consider this method the easiest and cheapest to enrich the land of any other, as, without any other manure, the grass lay alone would keep up the fertility of the land and insure good crops. I never turn my cattle, horses or hogs in my grass field to pasture, as I can keep them all better in the stable or yard, on one-third of the grass they would thus consume and tread under foot, and destroy. I would almost as willingly turn my hogs to fatten in my corn-field, as to allow my cattle to run at large and pasture in my field of grass. I mow grass and feed them in the stables and yard three times a day, and while they enjoy their food much better in the shade, they are all at work all the time, in manufacturing dung of the very best kind; and the quantity they make is sufficient to enable me to manure twenty-four acres very heavily, to wit: twelve planted with corn, and twelve sown with winter grain. Indeed, I consider this method of feeding farm stock, one of the most important parts of good farm management. But I know there are objections made to this, on various grounds; but after all, the only objection in reality is, that it is "too much trouble." If this plan is pursued there will never be any need of guano on a farm, or any other artificial fertilizers. In truth the farmer can in this way often make more dung than he can safely use, without endangering an overgrowth of his crops, especially the wheat crop, which is injured by an excess of stable manure.

I am careful to keep an account every year of all the products of my farm, and of the quantity and value of each article sold. And I send you hereto annexed a statement of the articles sold for last year, 1857, and omit what was retained for family use, feed, seed, &c., &c., viz:

Corn,	sold 824 bushels, at 60c.,	\$494 40
Oats,	" 632 " at 35c.,	221 20
Wheat	" 376 " at \$1 10,	413 60
Rye,	" 25 " at 70c.,	17 50
Hay,	" 10 tons at \$15,	150 00
Butter	" 743 pounds, at 20c.,	148 80
Apples,	" 324 bushels, at \$1,	324 00
Pork,	" 3,642 pounds, at 8c.,	292 36
Eggs,	" 174 dozen, at 15c.,	21 00
Cherries,	" 315 quarts, at 6c.,	18 90
Currants,	" 316 quarts, at 7c.,	22 12
Peaches,	" 60 baskets, at \$1 25,	75 00
Gooseberries,	427 quarts, at 8c.,	34 16
Total cash receipts,		\$2,232 84

I also keep an account of cash outlaid for farm labor, &c., which for the year stated, 1857, amounted to a little over three hundred dollars, leaving me nearly two thousand dollars nett profits for the one year, and that too when the prices of grain, and all farm produce were unusually low. INDUSTRY. Philadelphia Co., Pa., 1858.

Recipe for Artificial Honey.

To 10 lbs. crushed sugar, or good coffee sugar, add 3 pints of water; scald and skim; then add 3 lbs. good strained honey, 4 grains of cream of tartar, and 10 or 12 drops of the essence of peppermint. Mix the whole intimately, and it is ready for use.

Many prefer this mixture to pure honey, as it can be eaten by most persons who cannot eat honey without injury. D. S. HEFFRON. Utica, N. Y.

Wintering Sheep.

EDS. CO GENT.—Perhaps a few hints on the best manner of wintering sheep economically and profitably, will not be out of place in your columns; and it may be that the experience of the writer will be of use to your readers or some of them.

It is well known that sheep or cattle eat more in cold weather than in warm; that extra food is required to keep up the supply of animal heat during cold and frosty weather. It is necessary, therefore, that good warm sheds or stables be provided for the sheep, spacious enough for the hay-racks to be under the same roof; and that the sheep have plenty of room. A shed 40 by 20 feet, is ample for 100 sheep; with the racks all round on the inside. Such a shed, with double roof and 12 or 14 feet posts, will give storage enough overhead for all the hay needed for the flock; and the hay can be dropped down directly into the racks through scuttles, thus preventing waste.

The sheep should not be allowed to run out of the yard—at least not on grass ground; for at every warm spell, when the ground is bare of snow, they will not eat hay if allowed to run on pasture or meadow, and will invariably lose flesh. They should also have easy access to good soft water every day; they can do without water by eating snow, but they do not winter as well. One of my neighbors, who owns two farms a mile apart, and depends on a tenant to take care of the sheep on one of them, says he can tell if his tenant has neglected to water the sheep, within two or three days after, by the appearance of the flock; the bad effects of a want of water showing themselves in that short time. Good troughs must be provided for grain to be fed in; and the sheep ought to have at least half a gill of corn—or its equivalent in some other grain—each per day. They will not eat so much hay as they would if no corn was fed, and the weight of the fleece is increased by it, thus getting double pay for the grain. Of course, sheep intended for the butcher should have more grain, as this allowance would not fat them, but merely increase the weight of the fleece. Sheep fed under cover eat only about two-thirds as much hay as when fed out of doors. This saving of fodder will nearly pay for the sheds in three years, and is one source of profit in wool-growing. It costs about 50 cents per head more to winter sheep when the hay is fed in racks out of doors, than when they are in the sheds. Every lock of hay that gets wet will remain untouched, and of course is wasted. Sheep must have dry hay, or they will starve before spring; and if they do not die they will inevitably lose their wool before shearing.

At least four weeks before weaning time, the ewes should have roots daily, or, what is better, good clover hay. If the ewes have clover, their udders will be as full of milk as when in the pasture, and not a lamb will be lost for want of sustenance.

When hay is \$8 per ton, corn 75 cts. per bushel, and salt \$2 per barrel, it costs about \$1.50 per head (washing and shearing included,) to keep sheep a year. Good Merino sheep well wintered, and fed some grain, should yield about 5 lbs. of wool per head; and the lambs would be worth about \$2 per head at weaning, on the average. The net profits of such a flock would be not far from \$1 per head, showing what good care in the selection and management of sheep may be made to accomplish. D. A. A. NICHOLS

Increase of Weight in Hereford Steers.

MESSRS TUCKER & SON—As facts relating to cattle of any breed are interesting to practical men, I send you the weight of the sixteen steers sold to Mr. James Van Alstyne by Mr Geo. Clarke. They weighed when purchased in New-York,

Dec. 10th, 1857, averaging,	1262 lbs.
Aug. 6th, 1858, at Ghent, Col. Co.,	1695
Oct. 29th, " " "	1765
Nov. 23d, " " "	1803

This shows an increase for less than a year of 541 lbs. They were fed six quarts of cob and corn meal during October when on grass, and in November 12 quarts, in addition to their grass. This is not extraordinary, but I think a remunerating price for feeding. I saw the last weighing, and took the three former ones from Mr. Van Alstyne's book with the latter. If any Short-Horn breeder can show a more uniform lot of steers, in "color," symmetry, size, and weight with compactness, with less offal, I should be glad to see them produced. These steers will probably be sold to one butcher. If so, I will endeavor to get their weight of hide, tallow, and carcass, for the benefit of your readers, as this is the true test of quality and the profitableness of animals. Whenever you find the least shrinkage in offal, you find less consumers and more beef for food consumed; of this fact I have been satisfied for many years, and was one of the important reasons for my adopting the Herefords. W. H. SOTHAM Owego, N. Y., Nov. 26, 1858 [See Mr. H.'s advertisement in this paper, p. 273.]

Product of Bees.

MESSRS. EDITORS—I will give you an account of the profits of my bees this year. I wintered over last winter, 69 swarms, in good condition, and from these 69 stocks of bees I took this summer and fall, 2535 lbs. of pure box honey—2400 lbs. I sold at Canandaigua for 15 cents per pound, to be shipped to New-York. Some of my best stocks made six boxes full of honey, which weighed 72 lbs. I got 20 good young swarms, which I value at \$5 apiece.

It was a poor season for swarming this year, and not so good for making honey as some other seasons have been since I have kept bees.

I use the kind of hive recommended by QUINBY—a common box hive, made 12 inches square inside by 14 deep, with ten inch holes in the top, and then the boxes and a cap over them, as described by Quinby in his "Mysteries of Bee-Keeping."

As for millers and worms, the best and only way to get rid of them is to pinch their heads. EUGENE LEWIS. Ontario Co., N. Y., Nov. 15.

Crossing to Improve Fowls.

The second premium for the largest and best collection of fowls at the Mass. State Fair, was taken by E. F. Hollis of West Needham. They were a mixture of pure bred fowls with the common kinds, and by a judicious course of crossing, pursued for years, had been brought to a high state of excellence. Mr. H. secures a pure bred Dorking cock, and selects the best formed hens of his own stock, rejecting every pullet which has not all the requisite qualities. The same course is adopted by many farmers, and where early maturity for market is desired, is very judicious. Only the Dorking, Spanish, or game cocks, should be employed.

Farm Management.

[We have already mentioned that Mr. THOMAS' "Essay on Farm Management" appears, re-written and enlarged especially for this purpose, in the REGISTER OF RURAL AFFAIRS for 1859. The introductory sketch with which he opens the subject, together with its graphic illustrations, are copied below, and will give the reader a foretaste of what may be expected from the whole.]

It is an interesting subject for inquiry, why different men with the same opportunities, variously fail or succeed, after years of equal labor. One will become rich, the other poor, on the same piece of land. One has had continued prosperity, and doubled or tripled his capital. The other has met with nothing but difficulty, misfortune, and "hard times." Instead of increasing his capital, he has become heavily involved in debt. His farm has run down and diminished in value. Altogether, he has come to the conclusion, that except with a *lucky few*, farming is a very hard, slavish, non-paying occupation.



SQUIRE SLIPSHOD'S BARN.

His successful neighbor on the other hand, has adopted a very different opinion. His crops are good, with scarcely an exception—his fences impenetrable—his fields without a weed—his farm-buildings and barn-yards models of neatness—his cattle and sheep richly marked with improved blood, in fine condition, and eagerly sought in market at high prices—his fruit trees are bending under their rich loads, and his dwelling and door-yard a gem of rural beauty. He has "not quite yet" concluded to give up the business of agriculture for feverish speculation, nor for the close, pent-up, and anxious life of city trade.



FARMER THRIFTY'S BARN.

There is no lack of examples of both of these kinds of farming. The writer knows two men, now under fifty, who began active life in farming at about the same period—the first with very little property, the other with a beautiful hundred-acre farm. The first in less than twenty years had accumulated enough to buy seven hundred acres of the best land in that fertile region, and his average nett profits were between four and five thousand dollars a year. The other, with

the fine hundred-acre patrimony, has worked equally hard, but he had not an acre left him, and was insolvent.

Nearly all our readers are acquainted with two similar cases—those of *Farmer Thrifty* and *Squire Slipshod*. They will therefore recognize at once some of the accompanying roughly sketched portraits. *Squire Slipshod's* barn was originally the best in the neighborhood, but motives of economy have compelled him to omit some repairs he would have otherwise been glad to make—and he has become disheartened since he has discovered that boards and shingles become detached more easily than from the buildings of his neighbors. He has adopted a cheap fastening to his barn-doors, which, from its security, compels him to leave his wagons and tools outside. He especially wonders why *Farmer Thrifty's* barn and fence "keep in such good order."



THE SQUIRE'S DOOR-YARD GATE.

The Squire's door-yard gate is the best gate on his premises; although the hinges are a little imperfect, causing it to diverge from the post at the bottom—the



CARRIAGE GATE.

only inconvenience of which results from the street pigs, which are constantly thrusting themselves through. The carriage-gate is scarcely inferior to the one just



THE SQUIRE'S MODE OF WINTERING TOOLS AND IMPLEMENTS. described, but possesses opposite qualities, gaping open at the top instead of the bottom.

His mode of wintering tools and implements is not peculiar to him, but has some advantages, the main one being a saving of care and labor.

The Squire will not admit that his favorite horses are in any respect inferior to others, except it be that *Farmer Thrifty's* are a little fatter—which is more than balanced by their high feeding and pampered keeping.

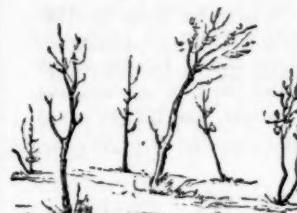


THE SQUIRE'S HORSES.

On these two points he confesses to have been unlucky. One is in his young orchard, which has never flourished so well as that of his more successful neighbor, but he will not believe that this difference arises from anything else than *luck*, although he never gives his orchard any cultivation.



FARMER THRIFTY'S TEAM.



THE SQUIRE'S YOUNG ORCHARD.



FARMER THRIFTY'S YOUNG ORCHARD.

ten bushels of corn per acre, while the Farmer usually gets from fifty to seventy.

Now the question very properly occurs, what should cause so great a difference in the farming of two neighbors — one always prosperous, the other as uniformly unsuccessful. The answer is an interesting and important one, namely, *difference in MANAGEMENT*. It is not the amount of la-

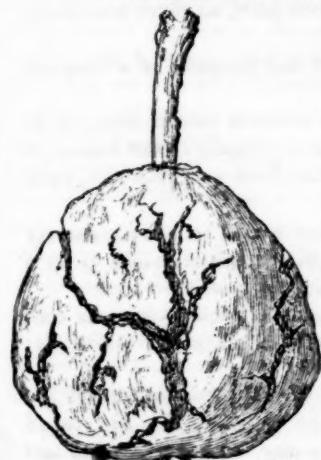


Fig. 1.

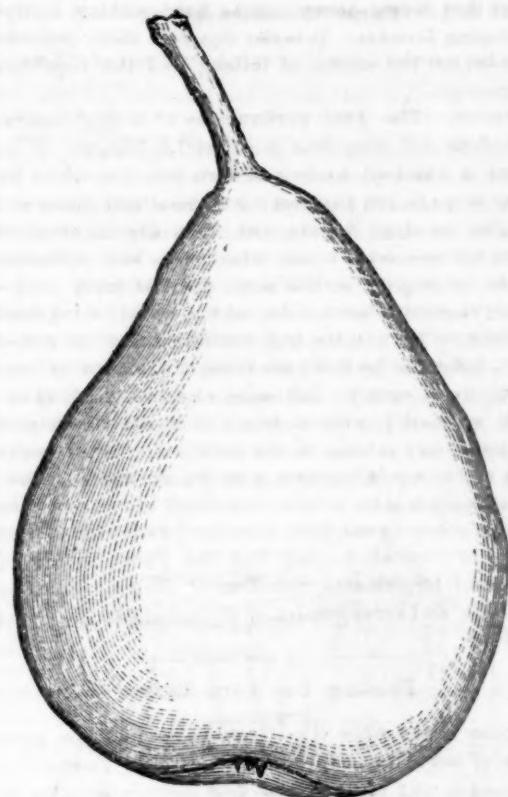


Fig. 2.

bor expended, but the way in which this labor is directed. A man may work hard for days together, in carrying a hogshead of water, by repeated journeys, in an egg-shell; or by efficient appliances it may be



THE SQUIRE "UNLUCKY" WITH HIS CORN CROP.

conveyed the same distance in a few minutes. One may fatigue himself to no purpose by taking hold of



THE FARMER'S CORN.

the wrong end of the lever, while its proper use may overcome any resistance. It is this bad application of

labor that causes heavy loss to hard-working, badly-managing farmers. It is the object of these remarks to point out the causes of failure, and the requisites for success.

ORDER.—The good performance of a single operation, does not constitute a successful farmer. If he raises a hundred bushels of corn per acre, while his other crops do not pay cost; or if he sells a young colt for two hundred dollars, and sinks five hundred on other animals, he is a poor manager. The perfection of the art requires a skillful attention to *every part*—a proper arrangement of the *whole*. Every thing must be done not only in the best manner, and at the proper time, but with the most effective and economical expenditure of money. All must move on with clock-work regularity, without hurry or confusion, even at the most busy seasons of the year. A comprehensive plan of the whole business must be devised. In maturing such a plan, several important branches of the subject are to be carefully examined, under the various heads of Capital, Laying Out the Farm, Buildings, Choice of Implements, Selection of Animals, Rotation of Crops, and arrangement of Operations in the Order of Time.

Feeding Out Corn-Stalks.

Some weeks since (Co. Gent. Sept. 30,) you gave some of our "notions" on "Curing Corn Fodder"—perhaps it may interest new beginners in farming to read some items of experience in feeding them out. It is a subject to which we have given considerable attention, our part of "the chores" at the barn being usually among the cows and sheep, rather than with the horses or hogs, and the supply of corn fodder being generally an ample one. Indeed, like many other farmers now-a-days, the stalks of our corn would, if properly cured and saved, and then fed out *without waste*, nearly winter our cattle.

But the feeding without waste—how shall it be done? Not in racks and mangers, at least, for from any of the half-dozen kinds we have tried, the stalks soon find their way out under the animal's feet. Not in stanchions or stalls, unless you wish to spend as much time in clearing away the refused stalks as in supplying them at first. Not around the yard, if there is any moisture about, for if once trodden where the juices of the manure wet them, cattle refuse them utterly. Where, then, do you ask—where, with the least trouble, the least waste, and to the greatest satisfaction of the consumers themselves? We will try to answer.

When do cattle seem to consume coarse fodder with the greatest relish? Usually in freezing cold weather. Then is the *time* to feed out corn-stalks. The yard is then the *place*—frozen hard, there is no moisture to soil the fodder—no rising odors to give stock a distaste to it. Scatter it around the yard, and they will eat all but the coarser stalks—all they will eat under any circumstances. In such weather we give them three times a day; in thawy weather give hay in racks, in any clean place where they will eat it, and with little waste.

If there is much manure in the yard, it will not freeze as early as dryer ground or more exposed situations. So we find it this year—a small lot back of the barn being frozen hard, while the sheltered yard is yet too soft for a feeding ground. We can use this lot

without loss or trouble, save that of raking up the refused stalks occasionally and returning them to the yard—to neglect this would be a very wasteful practice; they are needed for manure, and will help litter the yard—they are not needed where they now lie—reason sufficient for their removal. We now feed out corn-stalks and pumpkins there, and allow the old sheep to run with the cows a part of the time—the lambs being now in their yard, and fed on good clover hay and bean straw.

A neighbor of ours, who raises four or five acres of corn to our one, (mind we do not say bushels of corn, for he hardly begins to do it,) some years since tried cutting corn-stalks before feeding. He thought that it was some saving—rather more were eaten than if left whole—but he found it a good deal of labor, and the practice was soon discontinued. We do not believe it will pay, as a general rule, to cut the usual winter fodder for animals; they may as well use their teeth as we spend time and elbow-grease or horse-power, that they may fill themselves more rapidly. It seems reasonable that well-chewed food will be more perfectly digested than that half masticated, though for fattening animals it might be economy to give them all the aid and appetiteizers consistent with health and economy.

Corn-stalks, we would say in conclusion, are always worth saving. Because one has a poor corn crop it is no reason they should allow half its value to be wasted; but we have been, time and again, so pained by the sight of such waste, that we cannot forbear to utter our protest against it; and the half-starved animals of such farmers would protest, too, if they could, against the shiftlessness of their owners. J. Niagara Co., Dec., 1858.

Subsoil Ditching Plow.

Numerous inquiries having been made in reference to the plow advertised in this journal, and used in the experiments lately reported, showing the saving of expense in ditching by its use, we are compelled to answer them once for all through our columns.

1. Some inquire as to its strength and durability. It is not heavy, weighing but little more than 100 lbs., but is so well braced, that in cutting some miles of drain with a strong team through stony ground, no accident or injury occurred, except wearing the point or shoe. By renewing the shoe, it would no doubt last much longer than a common plow, as there is scarcely any wear elsewhere.

2. It will answer well the purposes of a common subsoil plow.

3. It differs from the common subsoil plow, by its capability of descending and working at the bottom of a three-feet ditch, while the team and plowman walk on the surface.

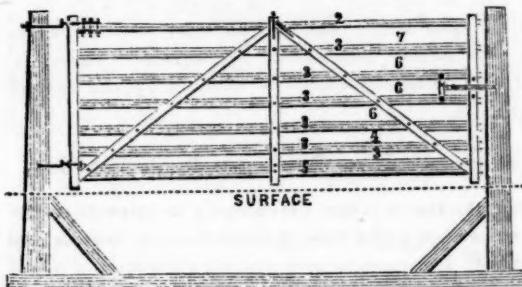
4. We think the \$10 plow would be more generally useful than the large or \$15 subsoiler, which is in a difficult and we think less easily managed form.

5. We have had a number of plows, variously contrived, for effecting the same object, & find this the best

LEAKING COW'S TEATS.—A correspondent of the New-England Farmer says, dip the end of the teat in strong alum-water twice a day, for several days, and the leak will cease.

Farm Gates.

I made some farm gates last spring that I am much pleased with. I presume many people have made gates after the same or a similar pattern, but perhaps I have added some improvements that they had not thought of, and perhaps they have some improvements that I have not, but to my certain knowledge there are many gates made at as great an expense for material and labor, but without having as good a gate when finished; in such instances I might suggest something of use. A person wishing to make a gate, but having no model before him to work from, would get much assistance from a plan, as to height, length, size of stuff, width of spaces, &c., &c., even though it was not just the thing he wanted to use himself.



Above is my plan. The figures refer to the size of stuff and width of spaces; the slats are $1\frac{1}{2}$ in. thick by 3 in. wide,—except the bottom one, which is 5 in. wide—and 12 ft. long; the end posts $2\frac{1}{2}$ by 3 in., and cut 5 ft. long, but as the gate is but $4\frac{1}{2}$ ft. high, it leaves 3 in. beyond the mortice, which is required to prevent the posts splitting out at the ends. The top rail is 2 by $2\frac{1}{2}$ in. In most gates that I have seen, the top rail has been 3 by 3, and cut down from the middle of the gate to the front end to 2 by 3. The only place it is necessary to be 3 in. is for the mortice to receive the perpendicular.

The first gate I made was to fill a space 14 feet wide, and not having any 3 by 3 stick of that length, I took a common chestnut fence rail, 2 by $2\frac{1}{2}$, and in place of morticing and pinning the perpendicular into it, made a shallow mortice sufficient to keep it in its place, and used a strap bolt, riveted to the perpendicular and passing through the top rail, with a nut on top, and also another strap or wing riveted to the front brace, the tendency of which is to draw away at this point and leave an open joint; this strap-bolt binds the whole firmly together at one of the points of greatest strain, and I was so well pleased with it, that I continued to use it in preference to a heavier top rail.

The upper hinge, you will notice, passes through the post of the gate in the same mortice with the top rail, and bolts on to it. By this arrangement, the whole strain of the top hinge is transferred directly to the top rail, drawing lengthwise upon it, and without straining any other part of the gate. The lower hinge should pass through the frame of the gate, with a nut and washer on each side, so that, if there is any sagging in gate or post, by altering these nuts the gate can be raised to swing clear again. The top hinge should also pass through the post the gate is hung to, with a nut on the back side for the same purpose. With this hanging, a gate will swing either way if desired.

In putting the gate together, I used 3 in. carriage

bolts, $\frac{1}{4}$ in. iron, using a bolt at every crossing of brace and slat. The bolts can be got at hardware store, cost \$1.75 a hundred—washers, 4 or 5 cents a hundred—and are much stronger and better in every respect than nails.

I have used the latch hung with a chain, and swinging horizontal, and also the latch hung at the end like a common door-latch; of the two, I like the latter the best; either should pass through a mortice in the front post, with a bolt above and below it, to prevent splitting.

Next in reference to a post to hang the gate to. Here but few are sufficiently particular, and the consequence is, after a year or two the gate rests on the ground instead of swinging, and has to be carried round by main strength. The best arrangement I know of, is to dig a ditch the width of the gateway, $2\frac{1}{2}$ or 3 ft. deep, then lay an oak sill in this ditch, and mortise the posts into it with a stout brace from the sill to the post; fixed in this manner, the post cannot sag as long as the timber remains sound, and the gate once hung to swing clear will remain so.

This number of slats and width of spaces, is intended for a roadside gate, that will be required to stop pigs, sheep, geese, &c., but for a gate between lots, to turn horses and cattle only, a four feet gate with one less slat, and hung a little higher from the ground, answers every purpose. J. H. B. North Nassau, N. Y.

"Sod" Crops on the Prairie.

Such weeds as are indigenous to the soil, are often the only crops raised by the farmer on their summer's "breaking" upon the prairie. Others "cut in corn"—cutting through the sod by a blow from an axe, and depositing the seed—which receives no other care until harvest. A few have sown buckwheat and other crops, which practices we fully commend and hope to see more extensively adopted.

Buckwheat sown liberally upon the inverted sod hastens its decomposition, and to a considerable extent, prevents the growth of those weeds which would otherwise occupy the ground. Keeping down weeds is sufficient to repay the sowing of this grain, though its product were never harvested save by stock, but we have seen its yield quite as remunerative as though sown on older ground. It may be sown on the sod either before or after its inversion—and even in the latter case, will grow without harrowing, though a light operation of the kind is to be preferred.

Beans are also a profitable crop on the "sod"—cut in with an axe or spade, they need no farther cultivation until harvest, and usually yield a liberal return.

Millet is sometimes grown very successfully on the new breaking, and also the Chinese sugar-cane, and the Sunflower.

Large crops of turnips can be grown in favorable seasons at a very slight expense—merely the seed and labor of harvesting, or stock may be turned on before they freeze, to consume them. The better way, however, is to pit them for spring feeding to sheep and milch cows.

Besides the above named, all kinds of vines flourish and frequently give crops which repay the cost of tillage and breaking.

In view of these facts, furnished by a reliable Western farmer friend, we must call it poor economy to let a season be lost by allowing the "breaking" to remain in fallow.



Prize Black Spanish Fowls.

The above cut is a good representation of the fowls which received the first premium at the Fair of the N. Y. State Ag. Society. They were exhibited by W. R. Hills of this city.

• • •
Sending Poultry to Market, &c.

West Washington Market, No. 227, New-York, Dec. 6.

L. TUCKER & SON—The readers of the COUNTRY GENTLEMAN probably have noticed in your market reports, that Bucks county poultry brings 13 to 15 cents per pound, when this State poultry sells from 7 to 10 cents per pound, and the difference becomes greater as prices advance.

To explain why this is so is my object, thinking thereby to repay in part for some of the many valuable hints I have derived from reading your paper.

The Bucks county stock are of the Dorking five-toed variety, sufficiently crossed with the large yellow variety to have fine yellow legs and feet—not feathered legs—all young and *well fatted*, and nicely dressed—legs and wings tied snugly to the body with wrapping twine, and then tied in pairs, and packed snugly in boxes, backs up.

It is my opinion that if all the poultry that comes to New-York from sections where your paper is read, was fattened and put up as above, with a little attention to breeding, the advance in price realised by the farmers would be sufficient to furnish every family with at least one good agricultural paper. D. L. HALSEY.

P. S. *Lady Apples* sell to-day at \$15 per barrel, at wholesale—retail at \$1 per half peck. How many farmers have got one tree, or know what they are worth? *Garlick* brings \$5.50 per hundred bunches the year round. How many farmers know how to put them up? D. L. H.

Dr. E. HOLMES, Editor of the Maine Farmer, has been elected President of the Maine Pomological and Horticultural Society, and D. A. Fairbanks, Augusta, Secretary, and Russell Eaton, Publisher of the Farmer, Augusta, Treasurer and Librarian.

Tuscany Cattle.

The *Boston Cultivator* gives a letter from David Torrey, Esq., of South Scituate, relative to some cattle imported from Italy, and exhibited by him at the Plymouth Co. Fair last autumn. Mr. T.'s son, who is travelling in Europe, sent them, and says that he finds the finest cattle in Italy of any country he has visited, and these are a sample of the fine stock of Tuscany. The bull was procured by special favor from the Grand Duke's herd—its dam is a good milker, giving 24 quarts per day. The heifer sent is of the same breed—her mother gives about 22 quarts of milk per day. Their disposition is very gentle—they are usually led about there by little girls, by a simple halter on the nose, as one leads a horse. He saw the grandfather of the bull at the fair; its live weight was 3354 lbs.; and the oxen of the country look more like elephants than like cattle. The cattle have been here since August, and do not appear at all affected by the change of climate.

• • •
Premium Crop of Potatoes—Dan's Seedling.

EDS. CO. GENT.—Mr. Cleveland's statement of potatoes in your paper having attracted particularly my attention, I propose to give you my statement of a half acre of "Dan's Seedling," which received the first premium at our Franklin County Show.

The land was sandy loam—a side-hill pasture for forty years. The last week in April it was plowed 8 inches deep and dragged. May 15, less than two bushels of potatoes were cut, leaving one or two eyes on each piece, rolled in plaster, and dropped in the hills on a handful of ashes and plaster; no other manure being used on the land, on account of the young trees on the ground. The potatoes were planted 3 ft. by 3 ft. 6 in.—a full third farther than necessary—two or three eyes were dropped in each hill, and at hoeing only one, or occasionally two stalks were allowed in a hill. They were twice hoed, and harvested Oct. 26. The yield by measure was just 100 bushels of 60 lbs. each, and of these there were not two bushels of small potatoes.

Expenses: plowing and dragging, \$3.00—hoeing, \$3.00—harvesting, \$2.00—7 pecks seed, \$1.35—plaster and ashes, \$1.37. Total expenses, \$13.72. Product, 100 bushels potatoes at 60 cts., \$60.00—net profit \$46.28, from a half acre. I call the potatoes at 60 cents, the price of Carters here, though they will be soon sold for seed at \$1.00 for every bushel.

The "Dan's Seedling" originated in the eastern part of this State about five years ago, and is now the most popular potato in the State; and considering its great yield, (100 bushels from seven pecks!) its uniform size, entire freedom from rot, and its dry mealy character when cooked, is at present the best potato in the United States. I have the Prince Alberts and a dozen other varieties, but none fills every requirement but this.

I think one reason of my potatoes growing so unusually fine, was in consequence of light seeding and thinning out to one stalk, and for that idea I desire to make my acknowledgments to GERALD HOWATT, who I think has contributed some of the most sensible and useful articles in your paper. I intend to send you some of my potatoes if I can without their freezing. JAMES S. GRENNELL, Sec'y and Treas. Franklin Co. Ag. So. Greenfield, Mass.

Constant Improvement.

Every farmer should be constantly "fixing up" his barns, stables, and yard fences—constantly adding to the comforts and conveniences of his domestic animals and their attendant—constantly improving in neatness, cleanliness, and efficient shelter. Racks for fodder, and troughs for meal, are easily made at this time of the year, and frequently save their cost several times over, by keeping hay from mud and meal for waste. Every field should have a good gate to enter it, and these gates may be constructed in winter by every ingenious farmer who has a workshop and a few simple tools.

Raising Potatoes Under Straw.

MESSRS. EDITORS—In the May no. (151st page) of your excellent "Cultivator," I requested your subscribers to try the experiment of raising potatoes under straw, promising that I would do so and give the result. On the 8th June I put about half a bushel of very small potatoes in a corner of the field, on the sod, and covered them with about 8 or 9 inches of straw. A few days after we had rain, and the potatoes grew astonishingly, so that this fall I collected about a bushel of large and sound potatoes. I was obliged to take them up early, on the 5th Sept., as the field was cleared of grain and stock turned into it. Four persons of this county have tried the same experiment, and succeeded beyond their most sanguine expectations. This is certainly a cheap way of raising potatoes, and pieces of land, which, from stones or stumps, would be lost, are thus turned to profit. N. St. M., Canada East.

Grasses in North Carolina—Danthonia Glumosa.

The Danthonia glumosa grows in dense luxuriance, with long radical leaves, forming a thick pasture resembling that of the Kentucky Blue Grass, (*Poa pratensis*), on many of the higher mountains of North Carolina. I was told that it is an excellent winter grass, and much relished by both cattle and horses. It was common on Plot's Peak and Jones' Peak, two high mountains about six miles south-west of Waynesville, in Haywood Co., N. C. I do not know that it has ever been introduced into cultivation. It is certainly worthy of trial in its native region, where the cultivation of grass is too much neglected. That clover and timothy will flourish, has been fully tested in various parts of the state.

Dr. COFFIN, at Jamestown, in Guilford county, is doing much to improve the agriculture of that section. He is a lover of grass, and he finds its cultivation profitable in the increasing fertility of his soil, and the less expense of keeping his stock. He has cultivated successfully both the red and white clover, and also timothy and herds grass. Col. CATHEY, at the Forks of Pigeon, in Haywood County, N. C., a few years ago, had six tons 331 pounds of dry hay, from two cuttings on one acre, in one season. This shows what can be done. The mountains of North Carolina might become a great dairy region, and at least help supply the southern market with cheese and butter. To do this, more grass must be cultivated and new and improved breeds of cattle introduced. S. B. BUCKLEY. New York, Dec 4, 1858

Shelter for Houses and Barns.

Houses and barns, which stand in bleak situations, are often so severely swept by wintry winds that much fuel is consumed to keep the houses warm, and much fodder to keep up the animal warmth of stock. Trees and belts of evergreens prove therefore great promoters of both economy and comfort. In many instances, they may be secured during the winter. If the snow has covered the ground before it was much frozen, they may be easily taken up with broad eakes or circles of earth and placed on sleds for conveyance. They will always live if plenty of earth is thus carried with the roots. It is worth while to go many miles to secure evergreens.

Shelter for Sheep.

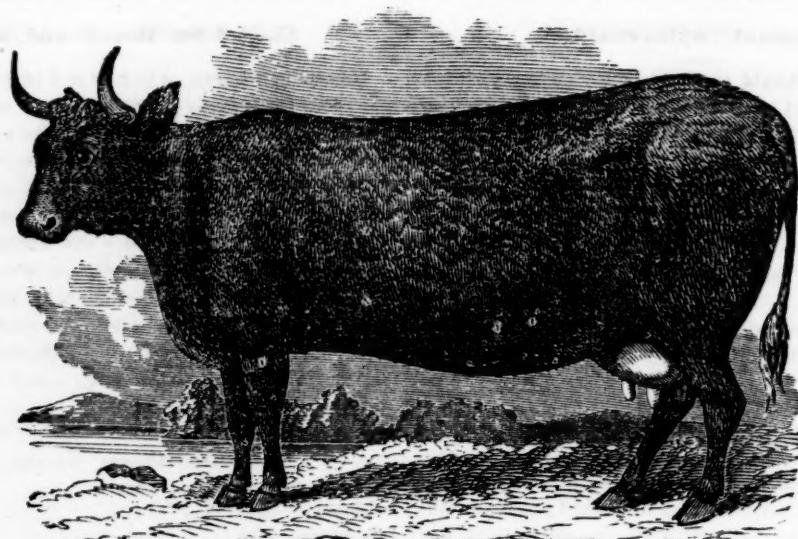
An intelligent farmer who provided good shelter for all his sheep, both from wind, and from overhead storms, assured us that he lost less during winter and spring, than through the rest of the year. Those who make provision of this kind, and who adopt the rule to do their own picking when they sell sheep as well as when they buy, need not have any poor or feeble animals.

Buckwheat on New Prairie Breaking.

EDS. CO. GENT.—Your commendation of buckwheat as a "sod crop" on the prairie, I think a merited one I finished my breaking this year, too late for corn or other sod crop, and concluded to sow it with buckwheat, and have harvested and threshed it, and received a return of from five to fifteen bushels per acre. Where I got but five bushels, it was sown July 18th, and did not come up until the middle of August. The other was sown ten days earlier, and was favored with an immediate shower. I am inclined to think buckwheat fully as profitable a first crop as corn or other usual product. W. H. G. Lee Co., Ill.

Draining—Large Barley Crop.

EDS. CO. GENT.—Go on, gentlemen, with your good advocacy of thorough draining. To help you, let me tell of a barley crop this season. The farmer who works my place (in Orrington, Maine,) certifies to me that from a field of five and three-quarter acres, drained land, he has harvested 260 bushels good sound barley, "round measure." He had measured one acre in the best corner of the field, from which the grain was housed and threshed separately, yielding fifty one bushels. This is not much behind "a good crop," under English high farming, and, I think, if the sowing had been with a drilling machine instead of a broad cast, Maine would not have been a whit behind England on this crop of about six acres. Except the good draining, there had been no more than ordinary good cultivation upon what was three years ago a piece of exhausted mowing land, cold, wet, and never fit for spring plowing. The "catch" of grass and clover, with the barley, is very good, and even promising in the future a good cut of hay. I have now more than five miles of drains laid, three and a-half to four feet deep, and hope to lay as many more, being well satisfied that I cannot afford to cultivate my soil undrained. N. E.



THE OAKES COW

The "Oakes Cow" and her Portrait.

In a recent notice of the excellent work on "Milch Cows and Dairy Farming," by CHARLES L. FLINT of the Massachusetts State Board of Agriculture, it may be remembered that we criticised the portrait of the "Oakes Cow" which it contains, as being rather out of proportion. Mr. F. has kindly sent us Number 3, vol. iv of the *Mass. Ag. Repository and Journal*, published at Boston under date of January, 1817, by the Trustees of the Mass. Society for Promoting Agriculture. This Journal contains the large plate of the Oakes Cow, from which the portrait published by Mr. F. is an accurate copy on a smaller scale. The latter we are pleased to be able to present herewith by his permission. It will be seen that there was some ground for our strictures as to ill-proportion, but that these are entirely due to the artist who made the original drawing, and by no means detract from the merit of Mr. Flint's enterprise in having a copy of it taken for the benefit of his readers.

The fact of the case probably is that the cow did exhibit a remarkable development of that part of the frame shown above as so extraordinarily large, and that the artist, unused to animal "portraiture" in attempting to catch this, to his eye perhaps the only prominent feature in the whole animal, made something of a caricature rather than a likeness.

In the account that accompanies her portrait as originally published, no dimensions are given, so that of course we have only the probabilities of the case to judge from in speaking of the accuracy of the likeness. It may be difficult to believe that there should have really been in this instance, a length of body which we estimate as nearly one-fourth greater in proportion than that usually allotted to the bovine race, but we certainly cannot affirm the contrary.

Since we are making the portrait of this beast the subject of such extended remarks, it will be rather unfair to pass by those remarkable achievements in the milk and butter line, that have handed down the name of her owner as a stumbling-block in the way of imported cattle and a strong-hold of defence to admirers of "natives" in this and probably in all future generations.

The "Oakes Cow," then, as she has come to be called in these latter days, was simply a "dark-red, rather undersized" cow, "purchased out of a drove," which chanced to get into the hands of one MR. CALEB OAKES, residing, we believe, at or near Salem, Mass., in the month of April, 1813. She proved a great producer, and was awarded the first prize at a State Fair held in 1816. The following record of her performances is copied from the work referred to at the beginning of this article:

Mr. Oakes made from her the first year, without any extra feeding, 180 pounds of butter. In 1814 he gave her about 10 or 12 bushels of meal, and made 300 pounds of butter. In 1815 he allowed her 30 or 35 bushels of meal, and the quantity of butter made was over 400 pounds.

Last spring I called on Mr. Oakes and requested him to keep a particular account this year of the product in milk and butter, which he has been so obliging as to furnish me. She calved the fifth of April, the calf was killed the 8th of May; being remarkably fine and fat veal. Through the season she has had good pasture, and has been allowed one bushel of meal per week, and all her skim milk. Some time in June or July, Mr. Oakes weighed the milk, at which time she gave at night, 10 quarts, weight 26½ pounds; 7 do. in the morning, weight 18 pounds—making 44½ pounds of milk per day.

Statement of Butter made this Season.

Before the calf was killed,		
17 lbs.....	July 17-16	Oct. 2, 16½ lbs.
May 15-14½ lbs.....	24-16	15-15
22-16	31-16	21-16
28-17½	Aug. 7-15	29-16
June 5-19	14-15	Nov'r 7-16
12-18½	21-16	18-18
19-17	28-15	23-10
26-18	Sept. 4-15	30-13
July 3-18	11-18	Dec. 10-14
10-17	18-12	20-10
	25-15	
Total,.....		484

Since Mr. Oakes has had the cow she has suckled four calves over four weeks each, and furnished about one quart of milk per day, for the use of the family. I purchased of Mr. Oakes some of this year's butter. I think I never saw finer.

NOT.—December 28th, 1816, eight quarts of milk per day.

*ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS
for 1859 By J. J. THOMAS. Albany : Luther Tucker & Son.*

This is the fifth number of this work, and is not inferior in interest to any of the series. It comprises for the space a great amount of information on a variety of subjects, especially on fruits and their cultivation.
—Boston Cultivator.

Draining with Boards.

LUTHER TUCKER & SON—In the Country Gent. of Nov. 25, p. 337, I notice the enquiries of A. L. Wood of Scioto Co., Ohio. Permit me to give a few hints from my knowledge, in addition to your remarks in your answer to the aforesaid enquiries.

Some ten years since a drain was put down, which now is as good and works as well as when first made. The ditch was dug two feet deep, with the requisite fall to drain off the water. I then took two hemlock boards, six inches wide and plump inch thick; I cut one board, to commence, in two in the middle, so that both boards should not butt at the same place, taking care to have both edges that were nailed, straight—showing the end thus, A. The ditch was cut the same as for tile, with the same slope as is usual. Where the bottom was soft, or quicksand, I put down a board at the bottom for the drain to stand on. Before filling, I put in fine hemlock boughs or straw. You will readily see that the earth will hold it together strong, so that with a slight nailing, it is perfectly safe from caving in. This plan has answered all the purposes of tile for ten years, and bids fair to last for years to come. In case of freezing, it has not been injured in the least.

If hemlock boards cannot be had, oak, ash, or basswood, will last well under ground for this purpose. There is much of this kind of drain put down in the north part of Oneida county, which shows that there is much confidence in the plan to save expense. GEO. TROWRIDGE. *Camden, Oneida Co., N. Y.*

A Cheap and Valuable Clod-Crusher.

MESSRS L TUCKER & SON—In the September number of THE CULTIVATOR is a communication from W. D. McCULLOCK of Loudon county, Va., recommending and describing a clod-crusher of very cheap and easy construction, for pulverizing the soil and levelling the land. The past season having been very dry in this section, and farmers having great difficulty in preparing fallow ground for wheat, I determined to try one of Mr. McCullock's crushers in reducing the clods previous to sowing, (many of which were very large,) and found, to my great satisfaction, that it performed the work quite beyond my expectation. It is true that where the clods are large and *very* dry, it will require the harrow and crusher to be passed over a second time; but if the ground is at all in a moist condition, once going over, first with the harrow and following with the crusher, will be sufficient. I agree with Mr. McC that for levelling a piece of land for meadow, and for giving it a smooth surface, I have never seen an implement superior to it—and *for the cost of it*, I consider it the most useful and valuable farm implement that has ever come under my observation. After the materials were provided, my workman was not more than three or four hours in completing it. Deeming Mr. McCullock to have rendered an important service to the farming community by his communication, I as one, take this method of presenting to him my sincere thanks, and expressing the hope that he will favor us through the columns of your paper, with a few more of the same sort. S. F. P. *Caldwell Co., N. C.*

A description of the clod crusher alluded to above, may be found on p. 107 of the current vol. of the Co. Gent. Every farmer should have one.

Breeding Turkeys.

MESSRS. LUTHER TUCKER & SON—The selection of Turkeys for breeding, with a view of improving the breed, is a subject on which there has been but little said, and until within a few years few persons were aware that they were susceptible of that improvement which the efforts of a few enterprising breeders have already shown. It is but a few years since farmers in this vicinity have been heard to boast that their fine flock of fat turkeys at New-Year's averaged ten pounds each, dressed weight. How is it now? Unless their turkeys, at the same age, average at least 14 or 15 lbs. each, we hear no "boastings." (By average, I mean pairs, male and female.)

The next question is, how has all this change been effected? I would answer, by simply selecting and breeding from the largest and best, instead of killing these and reserving those for breeders that were small and unthrifty, or late, and perhaps unfit to slaughter.

The rule that like begets like, applies to the Turkey with the same force it does to any breed of domestic animals. The same form and color may be obtained, by a selection and continuous crossing of such as are desired, adhering to the same forms and colors for a number of generations, when in time the breed will become so established as to be nearly similar in all respects. The more compact we can get a Turkey the sooner it will mature, the easier it will fatten, and consequently the more profitable it is to those that breed for the market. The object then is get those of the largest size possible, with short legs, and broad compact bodies. At least this is the form I would choose.

As deformed ones are liable to throw out those similar, examine them and see they have no deformities, such as crooked breast bones, or hunched backs. Select those of the largest and coarsest bone of this form. See also that they are both wide and deep in proportion to their size. Discard all that have a green unfinished coarse look, especially if a female, for those of this stamp are apt to lay soft-shelled eggs, and seldom make good mothers to set, or rear young ones. Select the earliest hatched and finest from your flock each year for your own use for breeding, and continue this for a series of years, and I assure any one who adopts this mode of breeding, that they will ere long find their account in it.

The improved domestic Turkey as we have them here, are all the different varieties of color but white. I have seen fine ones of a light silver gray; others, yellow or buff; also those between a bronze grey and yellow, or nearly the color of the spangled Hamburg fowls. But the most common colors are jet black, and dark bronze grey; the plumage of the males of the latter color, is glossy, much like that of the wild turkey, but of a darker hue. They have, or those of the latter color have, a slight resemblance to the wild ones in color, but none in form, being broader and more compact, and shorter in the legs, and instead of being wild and shy like the wild ones, they are naturally the most gentle of the turkey tribe; consequently there is no difficulty, let them lay where they choose, in removing them when they wish to set, to any place you may desire. They are as hardy as any Turkeys, and their natural docility makes them much easier to manage when rearing their young, than any breed of Turkeys I ever saw. E. ALLIN. *Pomfret, Ct., Dec 4.*

Inquiries and Answers.

"**IMPROVEMENT IN WAGONS.**"—By referring to your file of the Cultivator for 1847, p. 43, you will notice a description of an improvement in the running gear of carriages, and which refers to the use of the same arrangement in England. Can you give me any information as to where I can learn anything as to its use in England, in what periodicals or publications it can be found? S. D. LAW. [We are unable to give the desired information. Our correspondent will observe that the figure on p. 43 of the Cultivator for 1847, was intended merely to show the principle—he will find more minute directions for the construction and practical use of this kind of wagon on p. 164 of the same volume of the Cultivator.]

ICE-HOUSE AND DAIRY COMBINED.—Will you or some of your subscribers be kind enough to inform me through your valuable paper the best and cheapest mode of building an ice house with a dairy attached? My situation is hillside, well shaded and easily drained. J. WILLIAM DANNER. Warren Co., Va. [We would recommend the use of Schooley's Patent Preservatory, which has a room attached to the ice-house, and connected with it by ventilators in such a manner that the temperature of the connected apartments is completely controlled, and may be reduced nearly to freezing, or kept at any desired point between this and the temperature without. The required information, terms, &c., are given by J. L. Alberger, agent, Buffalo, N. Y.]

GRANARY—DADD'S HORSE DOCTOR.—I shall be obliged if you will let me know in your next number, the dimensions, and in your estimation the best plan for a timber-built granary capable of holding a thousand bushels of wheat. And also if you have any book in your establishment giving the description of and the remedy for the diseases of horses, and the price of such book. R. W. Farmer's Branch, Dallas Co., Texas. [The space required for 1000 bushels is about 1250 cubic feet—or a space ten feet wide, ten high, and twelve and a-half feet long. A more convenient form would be five feet wide, five high, and fifty feet long,—extending around an apartment on three sides, say 21 feet long and 18 feet wide, leaving a central area 16 feet long and 8 feet wide. *Dadd's Horse Doctor* is the best work on the diseases of the horse—price one dollar, sent by mail.]

RAISING PEACHES FROM THE STONES.—The number of your valuable paper containing an answer to my inquiries relative to the propagation of the peach, &c., has been received, (Co. Gent. Oct. 28, p. 270) Allow me to return my sincere thanks for your kind and satisfactory answer. The varieties you recommend I shall endeavor to procure if possible. If you can inform me where I can procure the genuine seed I will be under renewed obligations. B. B. R. St. Joseph, Mo. [The varieties named can be obtained only by budding those sorts into seedlings, and can be procured of any established nurseryman. Planting the stones will bring new varieties, some of them closely resembling the original, others more unlike, but commonly inferior. Some varieties produce from the stones nearly the same, with very little variation—with others there is more deviation. The stones of select sorts cannot now be procured, but they might be saved another year by any cultivator of the finer sorts.]

AUSTIN PINNEY of Clarkson, Monroe county, N. Y., and Dr. E. H. STLEVESTER, of Lyons, Wayne county, N. Y., both have extensive and select orchards, and would doubtless furnish a supply of the stones if applied to seasonably another year.]

THE HOP TREE.—I want more information about the Hop tree than what I have. I am told that as an ornamental tree they are as nice as the nicest, and that the hops they produce are superior to the common hop. If we have a native tree that combines the ornamental with the useful among us, please give us what information you or some of your correspondents may possess about it—how propagated and its character as a grower. D. B. RICHARDS. [We have for many years cultivated the Hop tree (*Ptelea trifoliata*) as an ornamental tree, but have never used the seeds for hops, and cannot therefore speak of their value. The tree is handsome, but not pre-eminently beautiful. It is easily raised from the seed and is a moderate grower.]

GRAFTING THE PEACH.—Can peach seedlings be grafted? I have a few thousand that I did not get budded this fall on account of the dry weather, and would like to graft them next spring, if it can be done with any kind of success. "What say you?" D. SHALLENBERGER. [The peach cannot be profitably grafted at the north. The operation sometimes succeeds, if a portion of the two-year wood is cut off with the scion and used, and the work performed very early in spring, with a sharp knife. At the south, grafting in the root is generally successful. We would recommend cutting down the stocks, training a single fresh shoot, and budding into it.]

STEAM-BOILERS—LICE ON SWINE AND POULTRY.—What steam or water boiler is the best for making hot water for cooking food for cattle? What will kill lice on hogs, (say two hundred in a pen fattening?) Lime sprinkled where poultry are kept will destroy lice, however numerous. A SUBSCRIBER. St. Matthews, Ky. [Our correspondent will probably find what he desires on p. 115 of the Illustrated Annual Register for 1853, in relation to steam-boilers, &c. We have had no experience with lice on swine—cleanliness is usually regarded as the best prevention,—clean pens and clean litter—and pulverized sulphur mixed with their food, say a teaspoonful a day to each animal, would probably be useful.]

THE CONTENTS OF A CORN CRIB.—In looking through "Pedder's Land Measurer," the other evening, I saw a rule and example for measuring corn in the crib, viz.—That a crib 12 feet long, 11 broad and 6 deep, would hold 330 bushels of shelled corn. The farmers in this vicinity have always used the following rule: Multiply the length, breadth and depth together, and divide by 3, which will, when applied to the above crib, give 264 bushels, showing a difference of 66 bushels in favor of the former. You will confer a favor by giving us your opinion as to which one of the above rules you consider the most accurate. J. B. T. Chaddsford, Del. Co., Pa. [We have made a hasty calculation, the result of which is between the two rules given above. Any estimate of this kind can only be an approximation to the truth—at best an estimate. The U. S. standard bushel contains 2,150 cubic inches; by multiplying the length, breadth and depth of the bin above mentioned, its contents will be found to be 1,368,576 cubic inches, which, divided by 2,150, yields a

quotient of nearly 637 bushels, and this halved (in order to reduce the corn in the ear to shelled corn,) gives us the actual contents of the crib in question, 318 bushels.]

DIGGING CARROTS AND POTATOES.—Will you inform me in regard to the comparative success of Allen's Potato Digging Plow, and the more complicated digger illustrated some time since, manufactured by J. E. Hardenburgh? Will some old carrot raiser inform me of the best method of digging them? Was it not for the labor of digging them, we should feed more carrots and less corn to horses. *J. B. JONES. Clinton Co., Iowa.* [We have not been able to give a full trial side by side, to both of these machines—Allen's we have thoroughly tested; of Hardenburgh's we have merely had an opportunity of examining its construction, but have not witnessed its operation. Both will work with equal rapidity, or throw out one row of potatoes as fast as the horses drawing it will travel. Allen's has greatly the advantage in simplicity and cheapness; while Hardenburgh's is probably more perfect in its operation, as it must unquestionably leave every potato on the surface of the ground, while a very few will escape Allen's. We can, however, strongly recommend the latter from the trial we have made, as a very valuable labor-saving machine, abridging the cost of digging at least three-fourths in ordinary cases, or in other words two men will harvest an acre with its aid, while they would be digging and picking a fourth of an acre in the common way. A furrow with the common plow close to one side of a row of carrots, followed by a sub-soil plow to run deeply under them, is the best mode of harvesting we know of, thus assisting their easy removal by hand. If any of our readers know a better way, will they please inform us?]

AGRICULTURAL BOOK-KEEPING.—A new subscriber says:—"Being a young farmer about to start in business, I have frequently, during my apprenticeship, sought for a set of books found by a practical "Co. GENT." to be suitable for farm accounts, but thus far in vain. Will not you be so kind as to give me a sketch of such books? I think the information would be gladly received by many. *N. M. E.*" ["Cochran's Farm Accounts," which we send by mail post-paid for \$2.30, contains the only system which we can now recommend as accessible to our correspondent. The set sold at above price, comprises an instruction book, not difficult to comprehend, and ruled blanks for day-book, &c., and ledger.]

LEAKAGE OF MILK.—I have a very valuable Durham heifer which has a small hole in the side of one of her teats. It makes it very inconvenient when milking. Can you give me a remedy for it. *R. W.* [We have sometimes been annoyed in the same way, but have found no effectual remedy. Collodion and other external applications soon work off, so far as we know. If some of our readers know a remedy, will they please give it?]

ARTIFICIAL INCUBATION.—Will you, or any of your contributors, be so obliging as to inform me, through the columns of the Co. GENT., whether chickens are hatched by artificial incubation to any considerable extent at the present time? and also explain the most approved method? *Roswell Hawley.* [Several "egg-hatching machines" have been invented both in this country and in Europe, but whether any of them have

proved really useful in practice we are unable to say. Our correspondent will find a full history of artificial incubation in the last edition of Bement's "American Poulterer's Companion," to which we must refer him, as we have not room for the explanation he asks for.]

JAVA SPRING WHEAT.—*C. E. K.* inquires for new spring wheat. Here, for the last two years, we have cultivated the Java Wheat in preference to Black Sea and other kinds. It is bearded, and on our poor Cape Cod soil, gives from 20 to 25 bushels per acre upon an average. What it would do on rich prairie I cannot say. Having been cultivated but a short time, it is rather scarce yet, and of course bears a good price. I send you a few grains. *HENRY F. GIFFORD. Falmouth, Mass.*

CROOKED HORNS.—I have a pair of steer calves, which took the first premium—perhaps the best in the State—at six months old, weighed 1,160 lbs, just alike—perfect in build, dark red without a white hair-grade Durham. The horns of one of them, from his crowding against the manger where he was tied, have an inclination out almost straight towards the sides of the head. Now I believe there is a way of scraping them a little when young, to give them a right direction. Is it to scrape on the side opposite that towards which you wish to incline the horn, on the principle that when it is scraped it will grow faster and push the horn over? Or should it be on the side which you wish bent, that the horn being weakened there may be inclined that way? Will somebody who has tried it tell? *J. S. GRENNELL. Greenfield, Mass.*

WHEN IS THE BEST TIME TO SOW PEAS?—This is a matter of some importance at any time, and more especially so of late years, our barley crops having been so nearly destroyed by insects. We live upon a soil natural to the growth of winter wheat. We want to grow a spring crop suitable for sowing wheat after. Our practice has been to sow after barley. I know of no crop so well fitted to take its place as peas. The best time of sowing this crop therefore becomes a matter of no little importance. Some say sow early—others not until June. For myself, I have had but little experience, and would like information upon this important subject, and desire to draw out the experience of practical men, through the medium of the Country Gentleman. Farmers, give us your views. *G. BUTTS. Onon Co., N. Y.*

CRANBERRIES FROM THE SEED.—Will you or some of your numerous readers, please inform me how cranberries can be raised from the seed. I have tried several times by planting the berry, both spring and fall, and a total failure has attended every trial. I have a piece of ground which I think well adapted to the growth of the cranberry, if I can get them started. *J. STAFFORD. Cleveland, O.* [The easiest way to make cranberry plantations is by setting out blocks of soil or sods containing the full grown plants. Transplanting the denuded roots is more difficult. The young plants from seed are at first very small, and probably would not succeed unless in a carefully protected and cultivated seed-bed, until they attain good size.]

RHUBARB DYING.—Will you please give me the cause of the rhubarb dying in summer after having made a fine growth? Please give us a remedy. *M. M. Danville, Ill.* [Will some of our correspondents please answer?]

Notes for the Month.

TO ADVERTISERS—PLEASE MENTION PRICES.—Permit me to ask you to suggest to your numerous advertisers of live stock, to name in their advertisements the price or range of price of their animals. Several of my neighbors, as well as myself, wish to purchase, and yet buy at home or in Kentucky, because we ascertain at once the price. We frequently, no doubt, could buy to better advantage at a greater distance, but it is tedious and annoying to have to open a correspondence to find the price of a boar, or sheep, or a game fowl. A SUBSCRIBER. Cincinnati, O. [The frequency with which this suggestion is made, shows that many desire to obtain information about advertised stock and articles, without going to the trouble of a correspondence. We have now before us quite a long letter from another distant State devoted to the same subject.]

JOICE'S STAR MILL.—A Subscriber at Nyack is "distinctly" informed that nothing in the form of an *Advertisement* is admitted into the *Co GENT*, except in the appropriate space reserved for this purpose. All "communications" may be distinguished from "Editorial" matter by the signatures of their writers. Applying these rules, which have ever been invariably adhered to in our columns, he will probably require no further intimation as to the character of a notice that we recently gave of the above mill. Because other papers do admit advertisements in "such a questionable shape," we have never thought it necessary to deny ourselves the privilege of expressing a favorable opinion of any implement or stock which we think may prove beneficial to our readers.

SALES OF DEVONS.—We learn that C. S. WAINWRIGHT, Esq., of "The Meadows," Rhinebeck, has recently sold, from his valuable herd of Devons, the following animals: "Hiawatha," calved March 13th, 1856, winner of 1st prize in class of imported two year olds, at Syracuse, to Hon. E. R. BROWN, Mount Hope, Miss.; "Roanoke," calved Dec. 3d, 1857, to Mr. GEO. F. CURWEN, West Haverford, Penn.; "Nebraska," calved Feb. 19th, 1858, to Mr. CHAS. P. ALSTON, Charleston, S C; "Utah," calved May 12th, 1858, and "Oregon," calved June 5th, 1858, to Mr. J. S. COLEGROVE, San Mateo, California.

THE SYLVESTER APPLE.—We are indebted to Dr. E. W. SYLVESTER of Lyons, N. Y., for a box of specimens of this new variety. It is a handsome and delicate fruit, ripening during the latter part of autumn; is nearly medium in size, roundish, regular, skin thin, yellowish white, often with a handsome, delicate red cheek, and somewhat netted with thin russet; the flesh is white,—nearly or quite as much so as that of the *Fameuse*,—crisp, fine grained, sub-acid, not high flavored, but very pleasant, delicate and agreeable. Dr. Sylvester informs us that the original tree, on his place, has a beautiful upright head—and that the fruit will cook in five minutes, and forms a very white dish. The examination of a single season is insufficient to enable us to fix the place of this apple in the scale of merit, but it certainly deserves further attention on the part of fruit-growers.

LIQUID MANURE FOR GRASS.—At the Massachusetts State Farm, liquid manure has been used to a con-

siderable extent. Hon. M. P. Wilder, chairman of the committee reporting on crops, says: "Wherever the liquid manure has fallen on grass land it has left its mark, producing hay and feed in abundance."

THE WOODBURN SHORT-HORNS.—We are pleased to learn by a recent letter from R. AITCHESON ALEXANDER, Esq., of Woodburn Farm, Woodford Co., Ky., that his extensive herd is all doing well. Mr. A mentions a young bull now coming on, which good judges have thought to be superior to "Albion"—a very promising animal already noticed more than once in our columns. The prospect at present is that there will be a somewhat smaller number of Short-Horns to offer at the next Woodburn sale, than was the case the past year, but the stock will be superior, it is hoped, to that presented on any previous occasion of the kind.

SCARCITY IN FRANCE.—Root crops and fodder were a comparative failure on the continent. The *Mark Lane Express* says: "Never were the graziers of France in a more deplorable condition, every kind of winter food for cattle having to a great extent been consumed to keep the stock alive. A great number of lean stock of all kinds have been brought over to this country, the price, which is not more than half the real value, proving a great temptation to speculate in them."

BLACK POLLED CATTLE.—This breed made a great show at the recent Fair of the Highland Ag Society. For good "butchers' beasts" it is not easily excelled—at least in Aberdeenshire. One bull shown there, it seems, took a gold medal at the Paris Exhibition, on the ground of being of a hornless breed, and hence harmless to men or other animals—the award being made by an amiable official of the French Society for the Prevention of Cruelty to Animals! It is well known that the polled cattle are far from being of an especial peaceable disposition.

THE FIRES OF LIFE.—When an inventor brings to notice some improvement which he has patented in the boiler arrangement or fire apparatus of an Engine, he is sure to claim that he can make a given amount of fuel go farther than any of his predecessors. He will point to the quantities of heat usually suffered to go to waste, and triumphantly endeavor to prove that he has made an unusually large proportion actively available. Now in the animated engines we see around us, whether two legged or quadrupedal, there is a similar waste of the fuel they consume in the form of food—the fires of life are kept up at an expenditure of a much greater mass in weight and bulk, than is added to the flesh of the consumer, even in times of growth and fattening. Dr. Playfair's calculations in stock feeding, were, that to produce one pound of flesh, there must be eaten

100 lbs turnips.	9 lbs. oatmeal,	4 lbs. lean meat.
50 lbs. potatoes.	71 lbs. barleymeal.	3½ lbs. peas.
50 lbs carrots.	7.4 lbs. bread.	3.3 lbs. beans,

in which it will be noticed that even when lean meat is itself used as food, the process of converting one pound into living flesh consumes three pounds—much as a donor of fifty guineas to one of the benevolent societies of England once remarked—that he had given one guinea for the benefit of the Hindus and forty-nine to get it to them. Chemists tell us, however, that in the case under consideration the waste may be honestly accounted for, which is some comfort. It would be a profitable thing if we could obviate at least part

of it. Without going into the philosophy of the fact, the season admonishes us to remind our readers that a much greater and more extravagant degree of waste than that above estimated, may be much reduced by the provision of **COMFORTABLE SHELTER**. If your stock are forced to lavish the heat of the inward life-furnace under the lee of some old fence, it is very certain that they cannot give out enough of it to render the season sensibly milder for you, and it may be regarded as equally sure that if protection is provided for them they will devote a much larger proportion of their food to flesh-saving and flesh-making, and a smaller part of it merely to maintaining the vital warmth. To recur once more to the illustration with which we began—in an engine every part used for the storage or transmission of heat, is thoroughly *packed* and surrounded by non-conductors, so as to retain the greatest possible portion for use—and so, if you are feeding your stock in order to keep up or better their condition, you will find it a profitable investment to put a roof over and tolerably close walls around them in cold weather.

THE RIGHT SPIRIT.—We make the following encouraging extract from a letter dated Davenport, Iowa, Nov. 29:—We have a meeting of our County Society next Saturday, and I hope to be there, and shall endeavor to get some subscribers to your valuable journals. I shall have some hope for the eventual success of Scott County farmers, if they will read and reflect a little. I consider the Co. *GEET*, one of the most accessible means for real practical agricultural knowledge, and if I can get ten men to take it, I shall rejoice over ten blessings brought into ten families. The weather is quite unusual—cold, damp, and frequently rainy. I consider the illustrations of Farmer Thrifty and Squire Slipshod capital, and the whole article extremely pungent and useful. W. A.

C. “He never went to his orchard except to gather its fruit.” This is the pithy form in which the Newark Daily Advertiser gives the source of the difficulty of which one of its readers complained bitterly the other day, viz: that when he went to his trees for apples, the apples were *not there*, but *he could’nt tell why!* How many there are who garden and farm on this system. They never go to the land, except to gather in its harvests. It quite surprises them that farming don’t “pay” as well as it “used to.” They never try the virtues of that arithmetical rule known as *addition*—confining all their agricultural figuring to its converse, *subtraction*. It wonderfully amazes them that a similar operation should have spontaneously started in the region of the pocket book. Fruit trees and grass lands, grain fields and stock, will all be likely to disappoint those owners who never expect to *give*, as well as *get*. Generosity to Nature, inanimate or alive, is a cardinal doctrine in the creed of all who would prosper under her benignant smiles.

PEAS AS A FIELD CROP.—Among the “noteworthy items” which we might (and shall) give from the last volume of our *State Ag. Transactions*, we condense the following: Amanda Newton of E. Bloomfield, Ont. Co., to whom was awarded 1st premium on peas, raised 38 bushels per acre, after wheat, and without manure. Variety Canada field peas; soil mellow Sowed 2½ bushels seed per acre the 15th of May, covered with the wheel cultivator. Harvested the 2d of Sept. with the horse-rake; drew and thrashed with

horses the 4th of same month. Product 40½ bushels to the field, 1 ½-20 acres. Expense of cultivation, \$11.50

THE OHIO STATE BOARD OF AGRICULTURE.—We have received (just as we are going to press,) an account of the Tenth Annual Meeting of the Ohio State Ag Society, at Columbus, Ohio, last week, and the election of the Board for the new year. We have only room at present to give the result of this election, which is as follows:

Lucien Buttles of Franklin.
John Reber of Fairfield.
J. M. Trimble of Highland.
L Q Rawson of Sandusky.
Dr. N. S. Townshend of Lorain.
Maj Jno. M. Millikin, (re-elected) of Butler.
Alex. Waddle, (re-elected) of Clark.
W. DeWitt of Cuyahogo, (new member.)
D. G. Gardner of Lucas, “ ”
C. H. Potwin of Muskingum, “ ”

The Board subsequently organized by electing Norton G. Townshend of Lorain, President; Lucien Buttles of Franklin, Treasurer; D. E. Gardner of Lucas, lin, Corresponding Secretary.

QUEENS CO. AG. SOCIETY.—We are indebted to the Secretary, JOHN HAROLD, Esq., for the proceedings of this Society at its annual meeting on the 6th of Dec. The following officers were elected:

President—Hon. D. R. F. Jones.
Vice President—G. L. Willard.
Secretary and Treasurer—John Harold.
Directors—Robert Willets and Joseph Tompkins.

The Society appears to be in a prosperous condition—the total receipts, including balance on hand, were \$2,659.15—payments \$1,745.41—leaving a balance of \$913.74.

LARGE CALF.—I notice you sometimes give accounts of heavy calves. Mr. F. J. SWABY of Seneca Falls has a grade Durham calf, which at five months old weighed 602 lbs. He sucked half his mother’s milk and no more—was fed some oil meal and ground oats besides. It appears to me it might be profitable to raise calves in that way for New-York market, as such calves would often bring fifty dollars each, and I don’t know of any way that cows would pay better. JOHN JOHNSTON. [We wish our friend Judge VAN BERGEN of Coxsackie, would give us his experience in fattening calves for the New-York market. If we are not mistaken, he at one time disposed of the milk from a considerable herd of cows in this way.]

WEEDING CHESS FROM WHEAT.—I have a *private* word to say to you, as I don’t want to see the old chess question dug up again. When any of your correspondents who believe in the transmutation of wheat into chess, say anything to you on the subject, tell them that I can weed out all the chess in the fall, and leave every spear of the wheat; so if it does change it must change very soon. The plants look widely different as soon as they come up, and half the trouble that people take to try to catch it *turning*, would learn them to distinguish the two plants, and if worth their time, weed it out. C. W.

C. E. CORNELL of Ithaca, N. Y., has just sold the fine Devon bull “Valiant,” who won the first prize as an aged bull at the New-York State Show in 1855, to OTIS E. WOOD, Etna, Tompkins Co., N. Y.

C. J. H. KLIPPART, Esq., Secretary of the Ohio Board, will please accept our acknowledgments for copies of his last State Ag. Report, transmitted through the hands of Col. B. P. JOHNSON of this city.

LIST OF NURSERIES—A few nurseries were omitted in the list published in the Register for 1859. A much larger number, found in other lists, of such as had ceased to exist, or were unworthy of notice, were also omitted. An anonymous writer in New Jersey, says there are two omitted in Burlington county, occupying some twenty acres each, but he does not inform us of their names and localities. This is like some other letters we have received, the writers of which seemed to think we could know more of every particular neighborhood throughout the entire Union, than the residents of those numerous districts. Some knowledge of the difficulty of collecting this kind of information may be obtained, when we state that the most noted nursery at Boston, and the second in size of the mammoth establishments at Rochester, failed to give us any information whatever, after repeated applications for it, and similar failures occurred all through the country. If the owners of nurseries do not respond to a widely published call, they must expect a few omissions of those of a more insignificant character.

MOVEMENT OF SHORT-HORNS AND SOUTH-DOWNS.—

Mr. SAMUEL THORNE of Dutchess Co., has recently sold, to Capt. MAYHEW of Centerville, California, the very promising bull calf, "Master Buttercup," got by "Second Grand Duke," (12,961) out of "Buttercup 2d." Mr. THORNE has sold to our spirited breeders in Albany county, the fine South-Down yearling bucks Nos. 7 and 57, and several ewes, all from imported prize ewes, and sired by the imported prize ram No. 112. Mr. T. has also sent to Albany a fine Berkshire sow, from the stock of his own importation, which will make a good cross upon the stock already in this section, from the stock imported by Col. L. G. MORRIS. The accumulation of such fine animals in Albany will be of vast benefit to the farmers of this and the adjoining counties. The Duke of Gloster, Duchess 64, 2d Duchess of Thorne-dale, and the other animals mentioned in No. 16 of Co. Gent., as having been sold by Mr. Thorne, passed through Albany, on the 10th inst., on their way to Geneva.

THE FAT CATTLE SHOW OF THE AM. INSTITUTE—held at New-York last week, although not large, is said to be an improvement upon one which took place last year. It is stated that there were in all ten exhibitors of Fat Cattle, showing 30 head—including 16 Herefords from Jas. Van Alstyne of Columbia Co., several head of Short-Horns and "natives," a pair of three-quarter Short Horn steers from R. D. Cornell, Clinton, Dutchess Co., a half Short Horn ox from J. A. Hamilton, Lima, Livingston Co., "weight 2,731 lbs., bought by Simon of Brooklyn, for \$200," &c. &c. The show of fat sheep was "large—that is there was one large fat sheep, exhibited by Wm. S. Holmes, Marathon, Cortland Co., a Leicestershire wether, said to weigh 330 lbs." A lot of 35 fat hogs, if we rightly understand the account before us, was exhibited by Mr. Hamilton of Livingston Co., averaging a weight of 430 lbs. each, and sold at 7 cents per lb. gross. About 20 coops of poultry were also shown.

We are indebted to our correspondent D. L. HALSEY, from whom a communication will be found in another column, for two pairs of fowls prepared in the manner he there describes, and certainly presenting a most inviting appearance—certainly sufficiently so to account for a great difference between the prices required for poultry so dressed, and that sent to market

in the ordinary way. Also, some weeks since, to the same source, for a pair of ducks, a cross of the black Cayuga with the Rouen. Mr. H. states that he finds on dressing ducks of this cross, "a gain of 1½ lbs. per head, giving me a balance in favor of taking the Country Gentleman and improvement of Rouen ducks, as follows:—

On hand 5 pairs,.....	\$25.00
3 pairs sold,	15.00
8 do. half-bloods,	4.00
Gain in weight on 75 dressed, 112 lbs., at 13 cts.,	14.56
Deduct 1 pair Rowen ducks,.....	\$58.56 6.00
Balance,.....	\$52.56

The feathers, and services rendered in catching grasshoppers, paid all expense in raising and fattening. D. L. HALSEY.

BUGGY PEAS.—Mr. D. Bostwick, of Wyoming county, thinks there is danger in pouring hot water on peas to destroy the bug, of destroying the vitality of the peas. He says he keeps his seed over one season, and in that way escapes their ravages.

GOOD HOGS.—I finished my butchering about two weeks ago. I had one hog that weighed when dressed, 641 lbs—a sow two years old last April, that had reared two litters of pigs, and two the same age, that had had three litters of pigs, weighing 448 lbs. and 465 lbs. JOHN C. DECKER.

SPRING WHEAT.—A Wisconsin correspondent writes us—"The Canada Club, for the last seven years the favorite and very successful spring wheat, has generally failed from one cause or another—the best crops being either 'Rio Grande,' a dark colored spring wheat, or the 'Fife,' a new variety just becoming generally known here."

FIFE OR "FLINT" WHEAT.—This variety of spring wheat, which before threshing, appeared to give great satisfaction, is *not* destined to have much patronage it seems. The reason is that its milling quality is "flinty," in correspondence with its general and appropriate name. The millers consider it a quite inferior article, from the grittiness or flinty quality of its flour. This I have from millers themselves.

All things considered, the Club is still the favorite spring wheat, though the Rio Grande was the best in yield and quality this season. But as there were several fields of very good club in different parts of this and adjoining counties, it is thought that some peculiarity of the season or time of sowing, was the cause of its failure, and that it is not "run out" yet. It will therefore have a further and extensive trial. C. WISCONSIN.

PROFITS OF FARMING.—Wm. D. KELLY, who received the first prize on Farms in Ohio, last year, in his report says: "My farm shows from \$1,000 to \$3,000 profit per year. The changes of the times change the profits. I have never lost money by farming yet."

IMPROVING SWINE.—We dined with a farmer friend the other day, who has succeeded in producing as fine bred porkers as we ever saw. He says, procure the best of each sex to be had; their produce will be an improvement. Continue to do so—if smaller animals are desired, breed in-and-in.

TO GET THE COST OF HAY, &c., BY THE TON.—Business men well understand that the cost of any commodity sold by the thousand—the price being known—is

got by simply multiplying the amount by the price, and cutting off three figures for cents and mills. The cost by the ton is as easily come at, if we first take half the price and proceed as above. For example—What will 6475 lbs. of hay come to at \$8 per ton? 6475x4 (half the price) = 25,900 = \$25 90.

A READER.—The volume which we advertise to send post-paid for \$1, contains the *Annual Register* for the years 1855-56-57. It is printed on large and heavy paper, giving liberal margins, and as the calendar pages and advertisements are omitted, and the whole re-paged and re-indexed, we consider it the most comprehensive and attractive work that has ever appeared on agricultural and horticultural subjects at the price. We call it RURAL AFFAIRS, and we think among its 440 illustrations you may find some both interesting and instructive.

THE EGG TRADE OF ONE COUNTY.—One merchant in Marion county, Ohio, has shipped this season 124,950 dozen of eggs in 1,785 barrels, costing, at 7c. a dozen, \$8,746 50. So say the papers.

Where our Publications May be Had.

The following list includes some of the Agents of our Publications in principal cities and towns. The ILLUSTRATED ANNUAL REGISTER may be had, at wholesale or retail, from them—including all the back numbers:

NEW-YORK—A. O. MOORE, 140 Fulton-st.
C. M. SAXTON, 25 Park Row.
FOWLER & WELLS, 308 Broadway.
WILEY & HALSTED, 351 Broadway.
TROY—LEVI WILLARD.
SCHENECTADY—GEORGE CLARE.
BUFFALO—T. S. HAWKS.
ELMIRA, N. Y.—WM. SKELLY.
ROCHESTER, N. Y.—D. M. DEWEY.
UTICA, N. Y.—WEBB & WALKER.
BOSTON, MASS.—JOSEPH BRECK & SON.
J. J. DYER & CO.
CURTIS & COBB.
SPRINGFIELD, MASS.—H. & J. BREWER.
LOWELL, MASS.—A. WHITNEY.
PITTSFIELD, MASS.—REID & PIERSON.
KEENE, N. H.—G. & G. H. TILDEN.
HARTFORD, CT.—J. O. HURLBURT and C. G. GEER.
MIDDLETON, CT.—D. BARNES.
WEST MERIDEN, CT.—HENRY WILLIS, Florist.
PROVIDENCE, R. I.—A. H. STILLWELL.
PHILADELPHIA—W. B. ZIEBER,
H. A. DRER.
PITTSBURGH, PA.—HUNT & MNER.
LANCASTER, PA.—SPRINGER & WESTCHAFFER.
BALTIMORE, MD.—J. S. WATERS.
LUCAS BROTHERS.
WASHINGTON, D. C.—WM. BALLANTYNE,
TAYLOR & MAURY.
WHEELING, VA.—THOS. HORNBROOK.
CLEVELAND, O.—HAWKS & BRO.
CINCINNATI, O.—JOHN F. DAIR & CO.
DAYTON, O.—O. KITTREDGE.
ST. LOUIS, MO.—KEITH & WOODS.
J. M. CRAWFORD.
DETROIT, MICH.—W. B. HOWE.
CHICAGO, ILL.—D. B. COOKE & CO.
S. C. GRIGGS & CO.
ROCK ISLAND, ILL.—H. A. PORTER & BRO.
DEVOE & CRAMPTON.
SPRINGFIELD, ILL.—FRANCIS & BURRELL.
MILWAUKEE, WISC.—EDW. TERRY & CO.
MADISON, WIS.—POWERS & HOYT.
NASHVILLE, TENN.—ARMSTRONG & CO.
LEXINGTON, KY.—C. S. BODLEY.
SAN FRANCISCO, CAL.—J. Q. A. WARREN.
VAN COUVER, WASH. TERR.—WM. KELLEY, P. M.
MONTREAL—B. DAWSON & SON.
JOHN DOUGALL.
THOMAS CAMPBELL.
QUEBEC—P SINCLAIR.
ST. JOHN, N. B.—W. L. AVERY.
JARDINE & CO.
HALIFAX, N. S.—E. G. FULLER.

WHITE TURKEYS.—A few pairs of beautiful White Turkeys may be obtained of the subscriber—price, \$5. Also, two pairs of Peacocks, in full train—price, \$6. A few White faced Spanish Chickens may be had at \$7 per pair, or \$10 for a trio—one cock and two pullets.

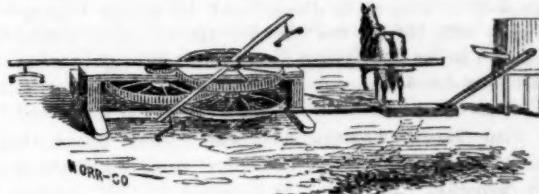
The above prices includes cages and delivery at Express office in Poughkeepsie. Apply to

C. N. BEMENT,
Dec. 23—weow2tm2t. Springside, Poughkeepsie.

PIGS—SUFFOLK AND BERKSHIRE
Blood, for sale by W. H. CLAY,
Staten Island.
Office No 82 Wall-st., New-York. Dec. 16—w&m2t*

INVENTORS — PATENTS — PATENTEES.—
Persons desiring to secure Patents in the United States or Europe can receive full printed instructions, free of charge, by addressing MUNN & CO., Editors of the SCIENTIFIC AMERICAN, New-York City.
Dec. 2—w9m2t.

FARMERS—If you consult your interest, you will not fail to send for a Circular, which will give you a description of the three greatest labor-saving implements of the age, viz., Share's Patent Potato and Corn Covering and Hoeing Machine—Share's Patent Cultivating and Hilling Machine, and Share's Patent Sod and Soil Pulverizer, or Coulter Harrow—all of which will save double their cost in the first season's use. They can be made by no other parties but the subscribers for this vicinity. Last season the demand for them was so great it could not be supplied, and if farmers are desirous of obtaining them the coming spring, they would do well to order them immediately, to be sure of getting them. There are no implements now made which give such universal satisfaction, and they were introduced and used in this vicinity the last season, and created a perfect furor. The price is within the means of every farmer who cultivates 25 acres of land. Whoever uses them once, will not do without them if it is a possible thing to obtain them. Address PEASE & EGGLESTON,
Dec. 23—wltm2t 84 State-st., Albany, N. Y.



JANUARY, 1859—HORSE POWERS AND THRESHERS.—The undersigned take occasion to give new notice that they continue to make and sell the "Improved Patent Portable Lever Four Horse Powers and Threshers."

The Power is simple and compact in construction, and readily understood by any one. It is not liable to get out of order, and can be worked with one, two, three or four horses.

The Threshers are of two sizes, numbers 1 and 2 suited to the power.

Experience proves that these machines give entire satisfaction in all respects, and that they are not only cheaper and more economical, but as, or more efficient than others more expensive.

Two hundred bushels or more of dry wheat are threshed in a day with these machines.

Weight of Power about 550 pounds. Weight of driving wheel for do., 300 pounds; or altogether about 900 lbs.

Weight of Thresher about 200 pounds.

Price of Power complete.....\$55.00

Price of Threshers, No. 1 & 2.....\$30 & 35.00

Cost of Patent Leather riveted band 40 feet long, 3½ inches wide, \$10.

Terms cash on delivery in this city. Orders promptly attended to, PLANT BROTHERS,

General Commission Merchants,

Jan. 1—mlt. 75 Pine Street, N. Y.

FARM BOOKKEEPING.—By W. D. COCHRAN of Detroit. Sets—comprising Full Instruction in this excellent system, a careful reading of which will enable an unpractised hand to understand it fully,—also Day Book and Ledger—for sale at this office—price by mail, post-paid, \$2.30. L. TUCKER & SON.

The Country Gentleman."

THE COUNTRY GENTLEMAN will enter upon its Seventh Year and Thirteenth Volume with 1859. Its progress with every recurring volume has been marked, and there are two unerring indications as to the character of its subscription list at this time, to which we may especially refer—the Contents of its pages during the year now drawing to a close, and the pressure that has existed upon its Advertising columns. The increase in the number of contributions to all departments, Agricultural, Stock, Horticultural, Gardening and miscellaneous, has never before been so great. Nor have the contributions themselves ever combined greater instructiveness and interest, or been more thoroughly marked by the practical experience of their writers. As an acknowledged center of information and channel of communication with the public, on Rural Affairs, the Co. GENT has never progressed more rapidly than in 1858. And in circulation, that it has not taken a single backward step, in a year that has witnessed the decrease by thousands upon the subscription lists of most of its contemporaries, affords as much source for congratulation as a large *increase* in ordinary "times." Now that we are all in a measure upon our feet once more, knowing where we stand and in search of means to help ourselves forward, the friends of a journal like this should endeavor to place it in more numerous hands, and to open a way by its enlarged circulation, to a renewal of activity in the mind, as well as on the farm, and through the business of every new reader. When prices are ruling low it is time for the go-ahead cultivator to make his next crop greater; when past crops have been cut off, he should be on the look out for preventives and remedies; when he sees his neighbors disposed to give up in despair and let things "work" as they will, then is the time for him to bestir himself—and if he be charitably disposed, to extend to others a helping hand.

"DON'T STOP IT."—This extract—which we recently made from a western subscriber's letter about the Co. GENT, has elicited a number of similar and cheering responses. A reader in Hancock Co., Ill., enclosing two year's subscription, adds—

"I hope, as another western subscriber has said, that you *will not stop my paper*, for I cannot well get along without it, although I am taking fully a dozen others, one-half of which belong to the agricultural and horticultural class, and I think yours *is beyond doubt the best weekly agricultural paper published in the United States.*"

Another in returning his bill accompanied with the money—for the Co. GENT, writes on the back of it, (Pope Co., Ill.,)

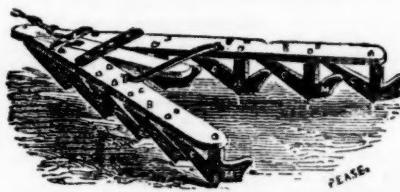
"I forfeited the terms of this bill, but it is cheap at \$2.50 per year. I would only wish for a reduction of the price to get others to take it. I wish you to consider me a life subscriber—'don't stop it.' I live in 'Egypt,' the land of darkness. We want agricultural light and the COUNTRY GENTLEMAN to make it one of the finest parts of the U. S. A., and the great fruit country."

A FIRST RATE AGRICULTURAL JOURNAL.—It gives us real pleasure to call the attention of our readers to *The Country Gentleman*, a first class family paper, published weekly in Albany, N. Y., at \$2 a year, by Luther Tucker & Son. *The Country Gentleman* is got up with superior taste, on excellent paper, clear type, with handsome illustrative engravings, and is printed in a superior manner. It is published in quarto form, suitable for binding. So much for its mechanical execution. In other respects it is unsurpassed by any other agricultural journal. Besides numerous intelligent correspondents in all parts of the country, it contains the best thoughts of the best writers, in all the departments of rural affairs to which it is devoted. J. J. Thomas, one of the editors, and Luther Tucker, one of the publishers, are among our most experienced agriculturists. Subscribe for *The Country Gentleman*.—*Life Illustrated.*

The Annual Register.

[F] "WORTH five times its price to any one who can read English"—so says a correspondent, in speaking of the ANNUAL REGISTER for 1859, just issued. Were it not that we frequently receive inquiries on the subject, it would be superfluous to add that the back numbers of the REGISTER may at all times be had at their original price—25 cents each, paper, or 50 cents cloth. Five are now before the public—from 1855 to 1859 inclusive. The first three have also appeared in a new edition on much larger and finer paper—bound in one volume—price \$1.

[F] "YOUR ANNUAL REGISTER is duly received, and is, as usual, a gem of a little thing. The "Farm Management" has been highly interesting to me; the "pictures" are suggestive reminders even to the best of us, and we can but look and see whether some of the hits do not apply. "Slipshod's" barn is certainly considerably in at the roof, and altogether dilapidated; his fence and gates very much awry; his tools and implements a stumbling block in the snow; his horses very thin, even if not inferior to "Thrifty's" fine team; his orchard pitiable to look at, and his corn patch would starve a mouse. *Country Dwellings* is a splendid theme for agricultural works to dilate on. Iron for garden furniture is much to be preferred to wood in any climate, from its durability; still stiffness peeps out in spite of its imitation of wood. *Under-draining!* Oh, that our prairies could be more easily drained; you of the hilly country beat us there; the chapter on draining, in the Register, is worth all the money asked for it. Not less so is the list of Nurserymen; it gives us a peep at the Leviathans of Rochester. Then Dexter Snow gives a chapter on the Verbenas. *Street trees*—Don't that little fellow look nice? Yet how few, after spending quite a sum for trees and planting, think of guarding them in so simple a way! A few go to quite a useless expense to guard their trees,—the remainder "let them take their chance," which generally ends a failure. E. S. Chicago, Ill.



S H A R E ' S C O U L T E R H A R R O W, OR PULVERIZER.—The above cut represents the most superior machine for pulverizing the soil, whether *heavy old sod* or *stiff clay land*, that has ever been introduced among farmers. The teeth are a series of colters placed in a three-cornered frame, and cut the soil or sod, pulverizing it several inches deep, instead of tearing it as the common scratch or Geddes harrows and large two-horse cultivators do. It leaves the soil in the most perfect order, and it accomplishes more in being drawn on plowed land once, than can be done by cross-plowing and harrowing with a common harrow combined. The weight of the machine is 189 pounds—its draft lighter than the Scotch harrow. The experience of Mr. John McHarg, one of the best farmers of the town of Bethlehem, in this county, has convinced him that it is the best instrument for saving labor in cultivating land, he has ever seen, and we are privileged to refer to him as to its superiority. The price is within the means of every farmer, being only \$15. For further particulars address PEASE & EGGLESTON, 84 State-st., Albany, N. Y.

[F] Agents wanted.

Nov. 25-w2tm3t

C O L E M A N ' S F A R M M I L L,
Cornstalk Cutter and Grinder—(Hickok's Patent.)
GRIFFING BROTHER & CO.,
60 Cortlandt st., New-York City.

Farmers sending us their address will receive our *Illustrated Catalogue and Almanac* for 1859. Dec. 9—w&m3m.

M A Y H E R & M C N A L L Y
Agricultural Implement Manufacturers,
AND DEALERS IN
FIELD AND GARDEN SEEDS

Nos. 195 and 197 Water-st., (near Fulton,) NEW-YORK.

N. B.—An Illustrated Catalogue and Price List furnished on application. Nov. 18—w&mtf.

E X P E N S E S a v e d i n D r a i n i n g !—The undersigned, after many experiments with ditching machines and draining-plows, has adopted a *Subsoil-loosening Plow*, drawn by horses, which has enabled him to cut more than a mile of drains, at less than half the usual cost of hand-digging, obviating entirely the use of the pick, and requiring only the shovelling out of loose earth by hand. Drains three feet deep, in hard and partly stony soil, commonly costing at least 30 cents per rod, have been in this way completed for 12 cents.

These *Subsoil Looseners*, drawn easily by two horses, and made under the direction of the undersigned, will be sent by railway on the receipt of \$10 by mail. A larger and heavier implement, on a different plan, requiring two yoke of oxen, furnished for \$15. J. J. THOMAS,
11 mo. 4—wtf Union Springs, Cayuga Co., N. Y.

A N D R E L E R O Y ' S N U R S E R I E S ,
At ANGERS, FRANCE.

The proprietor of these Nurseries—the most extensive in Europe—has the honor to inform his numerous friends and the public, that his Catalogue of Fruit and Ornamental Trees, Shrubs, Roses, Seedlings, Fruit Stocks, &c., for the present season, is now ready and at their disposition.

The experience which he has acquired in the last ten years, by numerous and important invoices to the U. S., and the especial culture which he has established for that market, upon an area of over 300 acres, are for his customers a sure guarantee of the proper and faithful execution of their orders.

Apply as heretofore to F. A. BRUGUIERE, 138 Pearl Street, New-York, his sole Agent in the U. S.

N O T E .—All advertisements or circulars bearing the name of Leroy, Angers, must not be considered as emanating from our house, if they do not at the same time mention that Mr. F. A. BRUGUIERE is our Agent. Address F. A. BRUGUIERE, New-York.
Sep. 2—w&m4m. ANDRE LEROY, Angers, France.

G O O D M E D I C I N E S .
IT IS estimated the AYER'S CHERRY PECTORAL and CA THARTIC PILLS have done more to promote the public health than any other one cause. There can be no question that the Cherry Pectoral has by its thousands on thousands cures of Colds, Coughs, Asthma, Croup, Influenza, Bronchitis, &c., very much reduced the proportion of deaths from consumptive diseases in this country. The Pills are as good as the Pectoral and will cure more complaints.

Everybody needs more or less purging. Purge the blood from its impurities. Purge the bowels, liver and the whole visceral system from obstructions. Purge out the diseases which fasten on the body, to work its decay. But for disease we should die only of old age. Take antidotes early and thrust it from the system, before it is yet too strong to yield.

Ayer's Pills do thrust out disease, not only while it is weak but when it has taken a strong hold. Read the astounding statements of those who have been cured by them from dreadful Scrofula, Dropsey, Ulcers, Skin Diseases, Rheumatism, Neuralgia, Dyspepsia, Internal pains, Billious Complaints, Heart-burn, Headache, Gout, and many less dangerous but still threatening ailments, such as Pimples on the face, Worms, Nervous Irritability, Loss of Appetite, Irregularities, Dizziness in the Head, Colds, Fevers, Dysentery, and indeed every variety of complaints for which a Purgative remedy is required.

These are no random statements, but are authenticated by your own neighbors and your own Physicians.

Try them once, and you never will be without them.

Price 25 cents per Box—5 boxes for \$1.00.

Prepared by Dr. J. C. AYER, Chemist, Lowell, Mass., and sold by all respectable Druggists everywhere.

March 11—wlam—mtf.

N U R S E R Y S T O C K A N D F A R M S
FOR SALE.—The subscriber offers for sale a Farm of 24 acres, lying on the west side of Owasco Lake, two miles from Auburn. The situation is high, commanding a fine view of the lake and its surroundings; and would be a good location for a gentleman's residence, or for a vineyard. The Nursery Stock which occupies a portion of it, will be sold with the place, or without it, at a very low price.

Also a Farm of 15 acres on the east side of the Owasco outlet, about the same distance from the city. Has a good House, and is well supplied with young Fruit Trees and small fruits. For particulars, address H. COLLINS, Dec. 9—w3tm1t Auburn, N. Y.

"The Best of its kind in the World."

S O M E T H I N G U S E F U L F O R A L L .—*Mechanics, Inventors, Manufacturers, Engineers, Chemists, Farmers, House-Keepers, &c.*, ought to get the *SCIENTIFIC AMERICAN*, published weekly, the best and only reliable popular journal of its kind published in this country. It is well filled with Engravings of Machines and Inventions of all kinds, and its pages are stored with a vast amount of useful matter upon the progress of Invention, Discovery, Mechanics, Arts, Manufactures, &c.; also claims of all Patents.

Terms only \$2 a year; \$1 for six months. Specimen numbers sent free. Address MUNN & CO., Dec. 2—w9m2t 128 Fulton-st. New-York City.

T H E H O R S E A N D H O R S E M A N S H I P
OF THE
UNITED STATES AND BRITISH PROVINCES,

BY HENRY WILLIAM HERBERT.

Author of "Frank Forrester's Field Sports," Fish and Fishing," The Complete Manual for Young Sportsmen," etc.

Third Edition.

H E R B E R T ' S G R E A T N A T I O N A L W O R K

ON

T H E H O R S E O F A M E R I C A

Is the most comprehensive and reliable work ever published on this most important and interesting subject. It affords a complete history of the horse from the earliest ages; contains essays on Breeding, Feeding, Clothing and general management; a history and anecdotes of the most celebrated Race Horses; the pedigrees of imported Mares and Stallions; a survey of all the various breeds of Horses; descriptions, performances, etc., of celebrated Trotters; in brief, it is a perfect *tade mecum* upon the subject, and whether for the breeder, the student, the farmer, or the general reader, an invaluable authority and guide.

It is issued in two superb imperial octavo volumes of 1,200 pages, illustrated with steel-engraved ORIGINAL PORTRAITS, from paintings and drawings by the most distinguished artists, of the following celebrated Horses, carefully printed on INDIA PAPER:

SIR ARCHY.	AMERICAN ECLIPSE,
BLACK MARIA,	BOSTON,
LEXINGTON,	PRYOR,
LANTERN,	POCAHONTAS,
GLENCOE,	LADY SUFFOLK,
STELLA,	WHALEBONE,
FASHION,	FLORA TEMPLE,
BLACK HAWK,	ALICE GRAY,

ETHAN ALLEN, &c.

Embellished with Vignette Title Pages, from original designs, by F. O. C. DARLEY, finely engraved on steel by the most eminent Engravers, including numerous

FINE WOOD ENGRAVINGS.

Published by subscription. Price, in embossed cloth and gilt, \$10. Mailed or sent by Express free of charge, upon receipt of the price.

This Magnificent Work should be in the possession of every gentleman interested in the breeding or management of the Horse. No work in any way its equal has ever heretofore appeared from the press!

"A valuable and interesting work. No time or money has been spared to make it complete in all its departments."—[Spirit of the Times.]

"This splendid work is everything that could be desired. It must become at once a standard authority on the subject."—[New-England Farmer.]

"In point of elaborated and general thoroughness, it is said to surpass anything of a similar kind ever produced in Europe."—[Boston Post.]

Agents wanted in every State.

W. A. TOWNSEND & CO., Publishers,
Nov. 18—w2tm2t. No. 377 Broadway, New-York.

Contents of this Number.

The Farm.

Our New Volume,	9
Laying-Out Farms,	11
Cost of Cutting Drains Reduced to less than One-Half,	12
Improvement of Grass Lands, by C. T. ALVORD,	13
Sorghum and Imphee,	13
Joice's Star Farm Mill,	14
Culture of the Sweet Potato, by G. H.,	15
Draining—Shallow Reasoning,	16
Composts—Muck and Night Soil,	17
Illustrations of Chinese Agriculture, by S. W. BONNEY,	18
Seed Wheat from the South and Corn from the North, by A. KILLGORE,	18
Raising Large Crops of Corn, by W. J. PETTEE,	20
Culture of Oats, by J. H. B.,	21
To the Transmuntors of Wheat, by PITTSBURGH,	21
How to Manage a Fifty-Acre Farm,	22
Farm Management of Farmer Thrifty and Squire Slip-shod,	24
Feeding Out Cornstalks, by J.,	26
Subsoil Ditching Plow,	26
Farm Gates, by J. H. B.,	27
Sod Crops for the Prairies,	27
Premium Potato Crop—Dan's Seedling, by J. S. GREENELL,	28
Constant Improvement,	29
Raising Potatoes under Straw, by N.,	29
Grasses in North Carolina, by S. B. BUCKLEY,	29
Buckwheat on New Prairie, by W. H. G.,	29
Draining—Large Barley Crop, by N. N. E.,	29
Draining with Boards, by G. TROWBRIDGE,	31
Cheap and Valuable Clod Crusher, by S. F. P.,	31
Inquiries and Answers,	32
Notes for the Month,	34

The Grazier.

The Best Doctor for Animals,	10
Wintering Calves—Costiveness,	20
Education of the Horse, by S. L. BOARDMAN,	20
Wintering Sheep, by D. A. A. NICHOLS,	23
Increase of weight in Hereford steers, by W. H. SOTHAM,	23
Tuscany Cattle,	28
Shelter for Sheep,	29
The Oaks Cow,	30

Horticultural Department.

Trees for Screens—Soil for Flowers,	10
Hardy Fruits for Canada,	12
The Peach Grub, Woolly Aphis, &c.,	18
Shelter for Houses and Barns,	29
Inquiries and Answers,	32

Dairy Husbandry.

Butter and Butter-Making,	11
My Experience with Winter Butter, by A. YOUNG FARMER,	15
Winter Food for Milch Cows,	17

The Poultry-Yard.

Point Judith Bronze Turkeys, by P. W. HUDSON,	19
Crossing to Improve Fowls,	23
Black Spanish Fowls,	28
Preparation of Poultry for Market, by D. L. HALSEY,	28
Breeding Turkeys, by E. ALLIN,	31

Domestic Economy.

Recipe for a Plain Pudding,	19
Soap for Chapped Hands, &c.,	19
Recipe for Artificial Honey, by D. S. HEFFRON,	22

The Apiary.

Product of Bees, by EUGENE LEWIS,	23
---	----

Illustrations.

Maps of Farms,	11
DRAINING TOOLS,	12
Joice's Star Mill,	14
THRIFTY AND SLIPSHOD'S FARMING,	24
FARM GATE,	27
SPANISH FOWLS,	28
OAKES COW,	30

D O M E S T I C A T E D D E E R.—Three pairs of Fawn, now about six months old, may be had if applied for soon. Price \$30 per pair, in cage, and delivered at Depot or Express Office, Po'keepsie. Apply to C. N. BEMENT, Dec. 2—*we3w3tm1t* Springside, near Po'keepsie, N. Y.

Just Published—Price \$1.25.

A Practical Treatise on Grasses and Forage Plants,
COMPRISING

THEIR Natural History, Comparative Nutritive Value
Methods of Cultivation, Cutting and Curing, and the
Management of Grass Lands. By CHARLES L. FLINT,
Sec'y of the Mass. Board of Agriculture. For sale at this
office, or sent by mail, for \$1.25.

Business Notices.

THE COUNTRY GENTLEMAN is issued weekly—each number containing 16 pages of this size. Subscriptions may commence at any time, and are considered to continue until the publishers receive notice to the contrary. *Two Dollars a Year in advance—Two Dollars and a-half if not paid strictly in advance.*

Clubbed with the Annual Register.

Eight copies Co. GENT. one year, and the ANNUAL REGISTER postpaid with each, \$13 16
Or, at the rate of \$1 65 per copy for the two, where eight copies, or a larger number, are taken.

The Country Gentleman without the Register.

One Year. Six Months.

Three copies,	\$5	Six copies,	\$5
Five copies,	8	Ten copies,	8
Ten copies,	15	Twenty copies,	15

NOTE Subscribers in the British Provinces must in all cases add 26 cents per copy to the above terms, to cover the U. S. postage to the lines.

NEW VOLUMES begin with January and July—each concluded with a complete Index of its contents, making a book convenient for reference on any subject discussed in its pages.

Terms of Cultivator and Register for 1859.

One copy Cultivator and Register,	75 cents.
One copy Cultivator alone,	50 cents.
Ten copies Cultivator and Register,	\$5 20

N. B. Subscribers in the British Provinces will add 6 cents a copy to the above terms, to cover U. S. postage to the lines. To them 10 copies of THE CULTIVATOR and REGISTER will cost \$5 80.

Premiums to Agents.

1. We will give a copy of THE CULTIVATOR and REGISTER for 1859, FREE to every one who sends us \$5 for a club of Ten subscribers, and the postage (22 cents,) which we have to pay on the Eleven Registers.
2. We will give a copy of either THOMAS' FRUIT CULTURIST, THOMAS' FARM IMPLEMENTS, the bound volume of RURAL AFFAIRS, a previous bound vol of THE CULTIVATOR, or any other \$1 book, to the one sending us \$10 for Twenty copies CULTIVATOR and REGISTER for 1859, and 40 cents to meet the postage on the Twenty Registers.

"RURAL AFFAIRS"—Volume One.

Under this title we have issued a new edition of the "ANNUAL REGISTER OF RURAL AFFAIRS," for 1855, 1856, and 1857, in one volume, handsomely bound—price One Dollar. The Calendar pages and advertisements which originally appeared, are now omitted, but the difference in size is more than made up in the weight and quality of the paper. It forms the most beautiful and complete Museum on all Rural Subjects, ever issued at the price, and contains 440 Engravings! Agents are wanted in all parts of the country, to sell this book, to whom liberal terms will be given.

SPECIMEN NUMBERS AND SHOWBILLS we shall be pleased to send at all times, and would be glad to have our friends when writing, give us the names of others in their own neighborhood, or at a distance, who would be likely to use them to advantage.